SHOCKS AND REGIME DEVELOPMENT : THE CASE OF THE NUCLEAR NONPROLIFERATION REGIME

Fiona Mary Ann Simpson

A Thesis Submitted for the Degree of PhD
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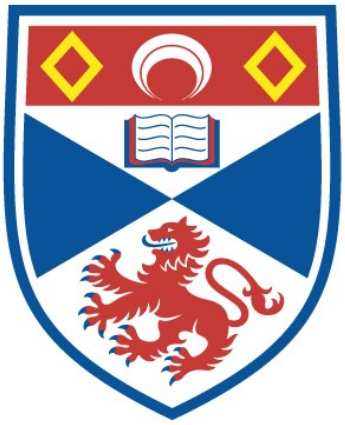
University of St Andrews



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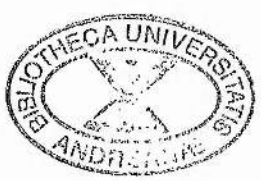

Abstract

The nuclear nonproliferation regime was established in the late 1950's and 1960's, especially with the creation of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 1968, and has altered considerably in subsequent decades. It has also been subject to the challenges posed by several external shocks. This thesis seeks to examine the relationship, if any, between shocks and the ways in which the regime has changed from its inception to the present day.

While there is a wide theoretical literature on international regimes, much of it ignores the ways in which regimes change and develop over time. Instead, most regime theory focuses on the reasons behind regime creation and decay, rather than on the processes that occur in between. When the question of regime change has been examined, it has also commonly been assumed that such change occurs in a gradual, incremental fashion.

This dissertation will examine the nuclear nonproliferation regime in order to challenge the assumptions in regime theory regarding the existence and manner of regime change. Specifically, the relationship between certain shocks and subsequent change (or its absence) will be examined through four contrasting case studies of shocks and their aftermaths. They involve the Indian nuclear test of 1974, the Israeli attack on Iraq's nuclear reactor in 1981, the post-Gulf War revelations of Iraq's nuclear weapon programme, and the Indian and Pakistani nuclear tests of 1998. These case studies make it possible to understand both the implications for regime theory generally, and the circumstances under which such change occurs, or fails to occur. The thesis ultimately asserts that the nonproliferation regime has indeed changed considerably since its creation, of necessity for its survival, and that such change was often non-incremental. It ends by proposing a model by which to illustrate the conditions under which regime change occurs in response to a shock.

I, Fiona Simpson, hereby certify that this thesis, which is approximately 100,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

Date 22nd July 2002 Signature of Candidate

I was admitted as a research student in September 1998 and as a candidate for the degree of Ph.D in May 1999; the higher study for which this is a record was carried out in the University of St. Andrews between 1998 and 2002.

Date 22nd July 2002 Signature of Candidate

I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of Ph.D in the University of St. Andrews and that the candidate is qualified to submit this thesis in application for that degree.

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Acknowledgments

When I arrived in St. Andrews in September of 1997, I wholly intended that my year as an M.Litt student would be my only one at the university. In the Spring of 1998, however, I found myself applying to stay on for a PhD under the supervision of Professor William Walker. My year's deferral from law school at McGill University was thus extended indefinitely (accompanied by feeble protestations from my father), and I began work on the nuclear nonproliferation regime. After three and a half more years of gainful unemployment, intermittent frustration and occasional bouts of hair-pulling (usually, but not exclusively my own), I have concluded that the decision to stay was undoubtedly the right one.

Arriving at this conclusion was made easier by the support and assistance I received along the way. I am enormously indebted to Professor William Walker, who pushed me to work harder on the thesis than I thought possible. He assured me, four years ago, that by the time I submitted my work I would and should know the subject inside out and be thoroughly tired of it. I hope he was right on the first count. The fact that he is wrong on the second, however, is due in no small part to his ability to be supportive while at the same time demanding my best work. For that I am grateful.

I would like to thank Professor Nick Rengger for his assistance and comments on my work and Vanessa Rengger for the translation of an article from German. In addition, I am obliged to the IAEA Division of Public Information and the Embassy of Israel (London) for their assistance in providing me with documents which proved extremely helpful. I am also grateful to David Fischer, Fred McGoldrick and Roland Timerbaev, who took the time to answer my e-mailed questions in the kind of detail which I had hoped for, but not really expected. Finally, I would like to thank the staff of the libraries of the Universities of St. Andrews, Edinburgh, and Glasgow as well as the British Library, the Uranium Institute, the Library of Congress and the library of the University of British Columbia.

It has been said that one never forgets a good teacher. Although I can't remember who said it, I do remember good teachers who have helped and encouraged me. These were Professors Mark Vessey, Kieran Kealy, Shaun Brown and Mr. William Hay. There is one, in particular, without whom I would not have been where I am. It is a superficially short step from a modern history course in my final year of high school to an undergraduate history degree to postgraduate studies in International Relations. If that initial high school course had been anything but excellent, however, those steps would not have been taken. I am therefore hugely grateful to my History 12 teacher, Dave Wightman.

It remains only to thank friends and family. Of my fellow PhD students, I am grateful for the support and friendship of Andrew Dalby, Suchitra Dutta, Caron Gentry, Anthony Richards, Maria Siemer and Andrea Teti. I would also like to thank Dr. Iain Munro and Brad Mackay in the Department of Management. In addition, I owe a great deal to Noel Brackney for tea (and beer), friendship, and Russian translations. Friends in Vancouver have also provided support and constantly challenged me (in a good way). These are Kristie Astrom, Caitlin Bigsby, Blair Codling, Deborah Hutchison, Graham Randell, and Cambridge Paulley. Finally, for their continual support and love, I would like to thank George and Ann Scandrett (Grandpa and Grandma), Frances Simpson (Nana), the rest of my family and my godmother. For their unfailing belief, encouragement, and love, I thank Mom and Dad. Dad, I'll go to law school one day – promise.

Acronyms

AEC	**Atomic Energy Commission**
BJP	**Bharatiya Janata Party**
CD	**(United Nations) Conference on Disarmament**
CIA	**Central Intelligence Agency**
CIRUS	**Canadian-Indian Reactor, U.S.**
CTBT	**Comprehensive Test Ban Treaty**
DOE	**(United States) Department of Energy**
DPRK	**Democratic People's Republic of Korea**
EMIS	**Electromagnetic Isotope Separation**
EU	**European Union**
FMCT	**Fissile Material Cutoff Treaty**
HST	**Hegemonic Stability Theory**
HEU	**Highly Enriched Uranium**
IAEA	**International Atomic Energy Agency**
INF	**Intermediate Nuclear Forces**
INFCE	**International Fuel Cycle Evaluation**
INFCIRC	**Information Circular**
KANUUP	
LEU	**Low Enriched Uranium**
LSC	**London Suppliers Club**
MAD	**Mutually Assured Destruction**
MAP	**Model Additional Protocol**
NATO	**North Atlantic Treaty Organization**
NMD	**National Missile Defence**
NNWS	**Non-nuclear Weapons States**
NPT	**Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty)**
NRC	**Nuclear Regulatory Commission**
NSC	**National Security Council**
NSG	**Nuclear Suppliers Guidelines**
NWFZ	**Nuclear Weapons-Free Zones**
NWS	**Nuclear Weapons States**
P-5	**Permanent Five (Members of the United Nations Security Council)**
PD	**Prisoner's Dilemma**
SAGSI	**Standing Advisory Group on Safeguards Implementation**
START	**Strategic Arms Reduction Treaty**
UN	**United Nations**
UNSCOM	**United Nations Special Commission**
USACDA	**United States Arms Control and Disarmament Agency**
WMD	**Weapons of Mass Destruction**

Introduction

The First Attempts at Preventing Nuclear Proliferation, 1945 – 1968:

The bombing of Hiroshima, in 1945, stood as the first public demonstration of the destructive power of nuclear weapons. This demonstration was closely followed by the bombing of the city of Nagasaki and, despite the fact that nuclear weapons have not been used in warfare since, the nature of warfare was changed as a result of their existence. Even before the acceptance of the notion of mutually assured destruction (MAD), the costs of a war in which such weapons were employed became far greater than those which had existed before.

As a consequence, the dawn of the nuclear age gave rise to acute pressures to prevent the proliferation of such weapons and equally acute difficulties in achieving that end. The United States – for a brief period the only state to possess these weapons – adopted three approaches which made various attempts to restrict their proliferation outside that nation's borders. These three separate but slightly overlapping phases emphasized denial, bilateral constraint and security guarantees and were applied before the founding of the nuclear nonproliferation regime in the late 1960's.

The attempt to prevent nuclear proliferation with outright denial of the technology and materials required was the first method adopted following the end of the Second World War. The United States ceased its nuclear cooperation with the United Kingdom and Canada – cooperation which had been so instrumental to the success of the Manhattan Project. The 1946 American suggestion of the Baruch Plan

represented "the first effort to control nuclear arms"[1], and proposed that an International Atomic Development Authority be created to oversee all aspects of nuclear energy development and with the ability to punish those who contravened its authority. Upon the establishment of such an authority, "production of atomic weapons would cease, existing stocks would be destroyed, and all technological information would be communicated to the authority."[2] After the Soviet rejection of the proposal, which would have created an Authority immune to a veto by the United Nations (UN) Security Council, denial became the official American policy on nuclear weapons.

This policy was soon made redundant when, in 1949, the Soviet Union successfully carried out its own test of an atomic bomb. The growing capability of these two nuclear states to carry out a successful – and devastating – attack upon each other gave rise to a desire to prevent the further spread of these weapons by means of bilateral control on the part of the United States and USSR. The spread of nuclear weapons to other states, however, continued apace. The United Kingdom, despite having been shunned by its former nuclear partner following the end of World War II, first tested its nuclear capabilities in 1952. France followed suit in 1960, and China in 1964.

With the denial and constraint of nuclear technologies not having achieved the desired end, the United States also began to turn towards security guarantees as a means by which to dissuade other states – particularly West Germany and Japan – from acquiring their own nuclear weapons technology. The 1949 creation of the

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[1] Albert Carnesale, Paul Doty, Stanley Hoffman, Samuel P. Huntington, Joseph S. Nye, Jr., Scott D., Sagan, *Living With Nuclear Weapons,* (Cambridge, Massachusetts: Harvard University Press; 1983), p.80.

[2] Jozef Goldblat, *Arms Control: A Guide to Negotiations and Agreements,* (London: Sage Publications Ltd.; 1994), p.31.

North Atlantic Treaty Organization (NATO) typified this shift in favour of a collective security agreement. NATO, established within the framework of Article 51 of the UN Charter, had its self-confessed origins in "concerns with expansionist policies and methods of the USSR."[3] As a nuclear state, a NATO member such as the United States (and later the United Kingdom and France) offered a nuclear guarantee to other, non-nuclear members, such as West Germany. The extension of a "nuclear umbrella" was also provided to Japan by the United States in 1960 with the signing of the Treaty of Mutual Cooperation and Security. In order to deter the possibility of Japan seeking to bolster its own security by gaining a nuclear capability, the United States offered a guarantee of that security by asserting that if Japan was attacked on Japanese soil, the US would defend it, by use of nuclear weapons if need be.

The Creation of the Nuclear Nonproliferation Regime (1968):

A widely-used definition of an international regime sees it as consisting of the "sets of implcit or explicit principles, norms, rules, and decision-making procedures around which actor expectations converge in a given area of international relations."[4] While the merits and inadequacies of such a definition will be discussed in the following chapter, it will suffice for an initial discussion of the creation of a nuclear nonproliferation regime.

Agreement on the first formal international treaty dealing with the specific question of nuclear weapons proliferation occurred in 1968. This "Treaty on the non-proliferation of nuclear weapons (Non-Proliferation treaty, NPT)" originated with the

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[3] *NATO Handbook: Partnership and Cooperation,* (Brussels: NATO Office of Information and Press; 1992), p.14. Article 51 of the UN Charter, under which NATO was created, reaffirms the inherent right of the individual state to collective self-defence.

[4] Stephen Krasner, "International Regimes," *International Organization,* vol.36, no.3, Spring 1982, p.186.

1959 Irish Resolution, which was put forward in the United Nations and which called upon nuclear states not to provide nuclear weapons or the related technology to other states, and on non-nuclear states not to acquire nuclear weapons. The NPT was negotiated in the mid-1960's with the final draft being adopted in 1968 as Security Council Resolution 255 and entering into force in 1970. This treaty became the backbone of a multilateral regime which had universal pretensions, and which centred around the nonproliferation of nuclear weapons. Given its centrality to the regime, it is necessary to outline some of its more important aspects, some of which would frequently resurface in discussion and debate over the course of the next thirty years.

The NPT itself consisted of ten articles and created a legal distinction between nuclear weapon states (NWS) and non-nuclear weapon states (NNWS). Those five states who had tested their nuclear weapon capabilities prior to January 1st, 1967 were, under the NPT, legally entitled to be considered nuclear weapon states, while the rest were not.[5] The treaty, in keeping with the Irish Resolution, did indeed oblige the NWS not to provide NNWS with nuclear weapons or otherwise to give assistance to a NNWS in creating such weapons.[6] The NNWS, for their part, undertook not to seek to construct or purchase nuclear weapons or to seek nuclear technology for that purpose.[7] In concert with such an undertaking, the NPT required that NNWS agree a safeguards deal with the International Atomic Energy Agency (IAEA), which had been created in 1956 to administer a system of safeguards capable of detecting a diversion from civil activities of nuclear materials for military purposes. This agreement with the IAEA (eventually codified in the NPT safeguards document,

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[5] See *Treaty on the non-proliferation of nuclear weapons (Non-Proliferation Treaty),* Article IX.

[6] Ibid., Article I.

[7] Ibid., Article II.

INFCIRC/153 of 1971) allowed for inspections to be made of the nuclear facilities of NNWS.

One of the most important components of the treaty was its fourth article, which enshrined the "inalienable right" of all parties to the treaty to develop, research, produce and use nuclear energy for peaceful purposes. The tension between the desire to prevent nuclear weapons proliferation while otherwise encouraging the peaceful application of nuclear energy was fated to become one of the more problematic issues for the regime. Equally as important – and equally as destined to be a source of future conflict within the regime – was the obligation on the part of NWS to "purse negotiations in good faith" relating both to an end to the nuclear arms race and to eventual disarmament (Article VI). The NPT, finally, was to be reviewed by its signatories every five years with a conference to be held after twenty-five years on whether to extend the life of the treaty for another set period of time, or to abolish it altogether, or to indefinitely extend it.

The Course of the Nonproliferation Regime:

In the time that has passed since the creation of the NPT and the establishment of the nonproliferation regime, there have been far fewer instances of actual nuclear proliferation than was generally expected. In fact, only two further states have demonstrated a nuclear explosive capability since 1968: India in 1974 and Pakistan (with India once again) in 1998. The regime has thus far weathered both of these incidents. In addition, it has survived Israel's vote of no-confidence through its bombing of an Iraqi reactor in 1981, the revelations a decade later about Iraq's extensive nuclear programme, the questions over North Korea's intentions, the South

African admission that it had constructed (and then dismantled) six nuclear bombs, and the collapse of a NWS in the form of the Soviet Union. What is more, the NPT remained textually intact throughout its history. Its indefinite extension in 1995, was achieved without its amendment.

This is not to say, however, that the nuclear nonproliferation regime itself is the same as it was when it came into being in 1968. Rather, it has developed and been elaborated in various ways. New bodies such as the London Suppliers Club (LSC) have taken their place within the regime, and new ways of thinking about the issue of non-proliferation have emerged. Importantly, such developments do not appear exclusively to have been part of a linear, incremental process. Instead, instances of rapid change have occurred after periods of inactivity which were ended by what may be described as a shock to the regime.[8]

The notion of a relationship between exogenous shocks and change is one which is found in economic literature although, as will be discussed in the following chapter, it has been all but ignored in International Relations theory. The impact of trade and supply shocks, for example, has been the focus of substantial examination in theories of economics and continues to be a popular subject for investigation.[9] The concern with the existence and role of shocks began to manifest itself at the beginning

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[8] In this, the regime reflects not a gradual, step-by-step evolution, but rather the kind of development which has, in evolutionary biology, been described as 'punctuated equilibrium' – a term first coined by Niles Eldredge and Stephen Jay Gould in a 1972 article entitled "Punctuated Equilibria: An Alternative to Phyletic Gradualism" in T.J.M. Schopf (ed.) *Models in Paleobiology,* (San Francisco: Freeman, Cooper and Co.; 1972). This refers to the notion that discontinuity is, in fact, a basic feature of evolution and that evolution occurs as rapid bursts of diversification interspersed with periods of stability.

[9] Some instances of this can be found in works such as Andrew Caplin and John Leahy, "Sectoral Shocks, Learning, and Aggregate Fluctuation," *The Review of Economic Studies*, vol.60, 1993; Mingwei Yuan and Wenli Li, "The Dynamic Effect of Government Spending Shocks on Employment and Work Hours," Federal Reserve Bank of Richmond, Working Paper: 98/09, August 1998; Paul Collier and Jan Willem Gunning and associates, *Trade Shocks in Developing Countries, vol.1: Africa*, (Oxford: Oxford University Press; 1999); and, most recently, David Rapach, "Monetary Shocks and the Real Exchange Hypothesis: Evidence from the G-7 Countries," *Review of International Economics*, vol.9, no.2, May 2000.

of the 1980's. The oil shocks of the 1970's, in particular, gave rise to the initial literature in this area, which attempted to understand the effect of such events.[10] In addition, the effect of monetary policy shocks and "technology shocks" has also become the subject of speculation.[11]

The various conclusions reached in these studies need not be documented here. Rather, it is enough to point out that the study of the wider impact of shocks, although largely absent in International Relations theory, occurs elsewhere in the social sciences. The concept of a "shock" is, apparently, so much taken for granted that a definition of the word is difficult to find. One article which focuses on the oil shocks speaks of a concern to understand how "unanticipated change in official interest rates pass through the economy."[12] The vague notion of an "unanticipated" event surfaces again in another article, written eight years later.[13] A specific definition of a "shock", however, appears to be missing from that literature which seeks to discover their impact.

Consequently, it is necessary to formulate a working definition, not simply of a shock but, in keeping with the focus of the investigation, of a shock *to an*

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[10] See, for example, Robert H. Rasche and John A. Tatom, "Energy Price Shocks, Aggregate Supply and Monetary Policy: The Theory and International Evidence" in *Supply Shocks, Incentives and National Wealth*, vol.14, Spring 1981, Karl Brunner and Allan H. Meltzer (eds.), (Amsterdam: North-Holland Publishing Company; 1981); Yannis Georgellis. "The Oil Price Shocks and the unit root hypothesis: the UK experience," *Applied Economics* vol,26, no.8, August 1994, pp.827-30. Stanley W. Black, "Learning from Adversity: Policy Responses to Two Oil Shocks" in *Essays on International Finance,* no.160, (Princeton, N.J.: Princeton University Press; 1985); and Joe Ganley and Chris Salmon, "The Industrial Impact of Monetary Policy Oil Shocks: Some Stylised Facts", Bank of England Working Paper Series, no.68 (London: Bank of England; 1997).

[11] See the series of articles in NBER Macroeconomics Annual 1998: Adam B. Jaffe "What do Technology Shocks Do? Comment," *NBER Macroeconomics Annual* 1998, vol.13, 1999, and two further articles with the same title in the same publication, by Jordi Galli and John Shea, respectively. Most recently in the area of technology shocks was Peter N. Ireland, "Technology Shocks and the Business Cycle: An Empirical Investigation," *Journal of Economic Dynamics and Control*, vol.25, no.5, May 2001. Recently, too, was W. Douglas McMillin, "The Effects of Monetary Policy Shocks: Comparing Contemporaneous versus Long-Term Identifying Restrictions," *Southern Economic Journal,* vol.67, i3, January 2001, pp.618-36.

[12] Ganley and Salmon, "The Industrial Impact of Monetary Policy Oil Shocks," p.7.

international regime. A "shock" will thus be defined simply as an event which challenges generally-held expectations of the future course of the regime and the problem that it addresses – in this case, the nonproliferation regime and the prospects for nuclear proliferation. It is the role of such shocks – and the pattern of regime development of which they appear to be a central part – which is the focus of this investigation. Such an investigation will lead both to a re-examination of the accepted understanding of regime change in mainstream regime theory, and to the proposal of a model of the processes by which such change may or may not take place following a shock. Although focusing on the role of shocks within the context of the nuclear nonproliferation regime, the following exploration will therefore have significance to more general questions regarding the ways in which regimes develop over time and regarding the ways in which change does or does not occur.

The Methodology:

The issue of regime change and development in the context of regime theory, and of the nonproliferation regime itself, raises three questions which the following examination will seek to answer:

1)Is it indeed the case that the development of the nonproliferation regime has occurred in a non-incremental manner, and how does this fit with the accepted understanding of regime change in mainstream regime theory?

2)Is it necessarily the case that, if significant regime change occurs following a shock to the regime, a shock to the regime will inevitably be followed by regime change?

3)Under what circumstances does a shock lead to, or fail to lead to, regime change?

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[13] Caplin and Leahy, "Sectoral Shocks, Learning and Aggregate Fluctuations," p.786.

Providing an answer to the first of these three questions, initially requires a detailed discussion of how regime change is understood in regime theory. This will therefore provide the subject of discussion in the following chapter. The ways in which these three questions will be answered will be elaborated below in the discussion of the structure of the thesis.

Before elaborating on the approach to these three questions, it is important to clarify the method to be used. The understanding of the relationship between shocks and regime development necessitates a detailed investigation of such shocks and a comparison between them. This invites the case study approach which has been adopted here. The selection of those cases is less obvious. A comparative analysis naturally presupposes that more than one case study is to be examined. A single case study, while capable of providing an answer to the first question – of whether or not the regime has developed in a non-incremental manner – is of little use in answering the remaining two questions: whether or not regime change necessarily follows a shock, and under what conditions. In addition, there is thus far no reason to assume that shocks affect the regime in identical ways and that therefore there exists one 'representative' shock which can be selected. It has been rightly observed that a single case study founders on the fact that "evidence can be found for too wide an array of variables and propositions."[14] This may not be a problem if one simply wishes to falsify certain assumption. If one wishes to go beyond that, as this investigation does, then the use of a single case study becomes problematic. It was also remarked of single case studies that although they may "provide interesting insights, they do not *by themselves* provide clear guidance for generalizations to other

[14] Gary King, Robert O. Keohane, and Sidney Verba, *Designing Social Inquiry: Scientific Inference in Qualitative Research,* (Princeton, New Jersey: Princeton University Press; 1994). p.8.

cases."[15] However, the possibility of this, and the further potential of extrapolating to other regimes, is one of the stated goals of this investigation. Consequently, the examination of a single event appears to be of little use in this instance.

If more than one case is to be examined, then, the question remains as to which and how many should be chosen. The 'correct' number of cases, assuming one is spoiled for choice, has unsurprisingly provoked debate. Too large a number of cases will impede the possibility of arriving at a robust theory. A smaller number of cases, on the other hand, has the advantage of more thorough study of context and contingencies. It allows, as one author observed, for the development of models or theories "that are sensitive to variations by time and place."[16] In making use of a controlled comparison of a small number of cases – and by combining both historical methods and those of the social scientist – the methodological underpinnings of the investigation most closely resemble those of Alexander George's structured, focused comparison. Such an investigation, in George's words, is

> focused because it deals selectively with only certain aspects of the historical case [in this instance, the effect of the shock on the nuclear nonproliferation regime]...and structured because it employs general questions to guide the data collection and analysis in the historical case [reflected here in the three questions which underpin the investigation].[17]

However, it is equally true that the decision to make use of a small number of case studies in order to answer the questions raised has been dictated as much by practical considerations as by methodological preference.

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[15] Christopher Achen and Duncan Snidal "Rational Deterrence Theory and Comparative Case Studies," *World Politics*, vol.41, no.2, January 1989, p.146.

[16] Michael Coppedge, "Thickening Thin Concepts and Theories: Combining Large N and Small in Comparative Politics," *Comparative Politics,* vol.31, no.4, July 1999, p.471.

[17] Alexander L. George, "Case Studies and Theory Development: The Method of Structured, Focused Comparison," in Paul Gordon Lauren (ed.), *Diplomacy, New Approaches in History, Theory and Policy,* (New York: New York Free Press; 1979).

The choice of cases to examine is, first of all, limited by the confines of the investigation. Given that the focus lies on the relationship between shocks and the nuclear nonproliferation regime, it stands to reason that those events which occurred before the formal regime existed are therefore excluded. This is not to argue that certain events were not a shock according to the definition cited above, simply that they could not have been shocks to the nonproliferation regime. As a consequence, events such as the bombing of Hiroshima or Nagasaki; the first Soviet hydrogen bomb test; the Cuban Missile Crisis; or the first British, French or Chinese nuclear test are excluded here as candidates for investigation.

In the years since the formal establishment of the nonproliferation regime during the 1960's there are three events which have likewise been excluded from the discussion and whose exclusion requires justification. These three are: the admission by South Africa in 1993 that it had acquired and dismantled six nuclear bombs; the growing evidence of North Korean attempts at nuclear proliferation beginning in 1992; and the collapse of the Soviet Union in 1990, which saw a significant proportion of that state's nuclear arsenal left in the territories of the newly independent states of Ukraine, Kazakhstan, and Belarus.

There are some good arguments for including these cases. However, the South African and North Korean events occurred in the shadow of the Iraq shock. North Korea, although it had signed the NPT in 1985, only signed the required agreement with the IAEA (INFCIRC/153) in April of 1992, and it was this document which, in the words of one former official "contained some surprises"[18] and demonstrated the extent to which this NPT-signatory had been flouting its obligations. Similarly, it was in 1993 that South African President F.W. de Klerk revealed that

South Africa had constructed and then dismantled six nuclear weapons. Both having occurred in the wake of the 1990/1991 revelations about Iraq's nuclear programme, it is consequently difficult to argue that, in keeping with the definition of a shock which will be used for the purposes of this thesis, these two events could be said to have challenged generally-held expectations of the course of the regime.

The case of the dissolution of the Soviet Union in 1990 is slightly more difficult to reject. It could be argued that its collapse was, first and foremost, a shock to the international system. Given that the USSR was a nuclear weapons state under the NPT, such a shock inevitably had implications for the nonproliferation regime. As a shock to that regime, however, it was indirect. Indeed, the whole event can be regarded as reinforcing rather than upsetting the regime.[19]

Primarily, however, the choice of the four cases was influenced both by the limitations of time and by a consideration that is both analytical and aesthetic. These cases are: the Indian peaceful nuclear test of 1974; the bombing of Osiraq in 1981; the revelations about Iraq's nuclear programme in 1991; and the Indian and Pakistani tests of 1998. Four cases appears to be sufficient in number not to fall prey to the problems posed by the investigation of a single case study and sufficiently low in number that a comprehensive investigation – one which allows for the nuances of historical context and contingency – may be successfully undertaken. The selection of these particular cases allows for a representation of different 'types' of shock. The Indian test of 1974 stands as an instance of a shock which was followed by a delayed but effective reaction. This is complemented by the Indian and Pakistani nuclear tests of 1998, in which the shock was apparently followed a quick but ineffective reaction.

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[18] David Fischer, *The History of the International Atomic Energy Agency: the first forty years,* (Vienna: IAEA; 1997), p.289.

Between these two cases, the first Iraqi shock of 1981 (the bombing of Osiraq) provoked very little reaction in the context of the regime. A decade later, the revelations about Iraq's nuclear programme provoked a great and immediate reaction in that context. Finally, the fact that the two instances of South Asian nuclear proliferation frame the two cases focussing on Iraqi nuclear ambitions has a pleasing symmetry.

Finally, there is a significant literature on each of these cases which can be drawn upon. This included, for example, American Congressional hearings, publications by the IAEA, as well as secondary literature. Even the bombing of Osiraq, historically the least well-explored of the four cases selected, had given rise to a base of literature capable of providing answers to the questions asked. There were, of course, limitations imposed by geography. It was not possible – and as will become clear not necessary – to do research in countries such as India, Pakistan, Israel or Iraq. The pivotal role of the United States in implementing regime change meant that the investigation could be successfully carried out by examining literature in English (although the study includes some in French, German and Russian).

Structure of the Thesis:

The discussion of the case studies, as noted above, will be examined chronologically, beginning with the Indian test of 1974, then the bombing of Osiraq and the Iraqi revelations in 1981 and 1991 respectively. The 1998 nuclear tests by India and Pakistan will then be considered. However, given the relatively small amount of time which has passed, this last case study will be condensed into one chapter rather than the two alloted to each of the other cases. The likelihod of regime

[19] See William Walker, "Nuclear weapons and the former Soviet republics," *International Affairs,*

change as a consequence of this shock will then be speculated upon in the light of conclusions drawn from the other three.

In order best to answer the three questions posed above, each case study (with the exception of that which explores the 1998 South Asian tests) will be divided into two chapters. The opening chapter seeks an answer to the first question. From a historical narrative of the case, conclusions will be drawn as to whether a non-incremental pattern of regime development may be identified and how this fits with the general understanding of change in mainstream regime theory. As an inevitable consequence of such an approach to the four cases, it will ultimately become possible to answer the second question: whether the relationship between a shock and the ensuing development of the regime may always be assumed.

The second of the chapters devoted to each case study will attempt to answer the third question which is to be investigated – one which seeks to discover the conditions under which a shock was followed by, or perhaps not followed by, change to the regime. This focuses especially on the ways in which the shock was or was not interpreted by the relevant actors involved. During the course of the investigation four interpretations of the event appeared to be linked with the eventual occurrence or absence of subsequent regime development. These four, which provide sub-headings in these chapters, are: the understanding of the danger posed to the regime by the shock; the acceptance of responsibility for bringing about change; the understanding of the urgency of change; and the belief in the solvability of the problems raised by the shock. As will be demonstrated, these themes manifested in the wake of the first shock to the fledgling regime in 1974. Such interpretations – which appear to underlie the conditions in which shocks translate to regime change –

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vol.68, no.2, April 1992, pp.255-277.

will ultimately provide the basis for the model of regime change which will be proposed as part of the concluding section. A glance at Figure 1 in the Conclusion will give the reader an appreciation of where the following discussion is heading.

Chapter 1: Regime Theory and Conceptions of Regime Change

Change is not made without inconvenience, even from worse to better.
Richard Hooker (Quoted by Johnson, as from Hooker, in the Preface to the *English Dictionary*)

The goal of determining the pattern of development in the nuclear nonproliferation regime, in the context of regime theory, necessitates an evaluation of whether and how such theory attempts to deal with change. Following a clarification of how regime change will be defined, it will be argued that the existence of a non-incremental pattern of overall regime development is one which, if established, is problematic for regime theory as a whole. My assertion is that the bulk of regime theory tends to ignore or, at best, marginalise the issue of regime change. Furthermore, when actively considered in regime theory, gradualist assumptions of change prevail.

The willingness to engage with the question of regime change began on an encouraging note in the late 1970's, with an extensive discussion in *Power and Interdependence,* by Robert O. Keohane and Joseph S. Nye.[1] In this text, one of the first to deal with the issue of international regimes, Keohane and Nye stated that "changes in international regimes are very important"[2] and sought an understanding of the concept of political interdependence in part by answering the question of: "how and why do regimes change?"[3] In practice, this tended to emphasise the "why" rather than the "how", with Keohane and Nye presenting four models in order to explain the

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[1] Robert O. Keohane and Joseph S. Nye, *Power and Interdependence: World Politics in Transition,* (Boston, Mass.: HarperCollins Publishers; 1977).

[2] Ibid., p.21.

[3] Ibid., p.19.

reasons for regime change.[4] It is not necessary to explore these models in detail here but rather to note the acceptance of the idea that international regimes underwent adaptation and change (although the style and manner of that change remained broadly unexplored).

In spite of this promising beginning, Keohane and Nye's emphasis all but disappeared with the arrival of regime theory proper, in the early 1980's. Although the study of international regimes and their place in the realm of international politics was first raised in the mid-1970's[5], it was the special issue of *International Organization* in 1982 which truly heralded the arrival of regime theory.[6] The series of essays which comprised this special issue has become so seminal that it is impossible to undertake any investigation into this area without a reference to them, and it was this series of essays which set the agenda for theorising about regimes for at least the next decade. Their importance is underscored by the eventual primacy of the so-called consensus definition of an international regime which underlay them. This definition, formulated by Stephen Krasner, identified a regime as constituting "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actor expectations converge in a given area of international relations."[7] Although two decades have passed since this definition was coined, it remains (with,

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[4] These models were labelled the economic process model; the overall power structure model; the power structure within issues areas model; and a model of power capabilities as affected by international organization. (See Keohane and Nye, *Power and Interdependence,* Chapter 3.) Interestingly, the authors asserted that "some regime changes have been rapid and dramatic whereas others have been gradual" (p.21). Apart from this, however, the manner of regime change was ignored at the expense of explaining why the change occurred.

[5] See, for example, John Gerard Ruggie, "International Responses to Technology: Concepts and Trends," *International Organization,* vol.29, no.3 Summer 1975, pp.557-583 and Ernst B. Haas, "Is there a Hole in the Whole? Knowledge, Technology, and Interdependence and the Construction of International Regimes," pp.827-876 in the same.

[6] *International Organization,* vol.36, no.2 (Spring 1982).

[7] Stephen Krasner, "Structural causes and regime consequences: regimes as intervening variables," in *International Organization,* vol.36, no.2, p.186.

perhaps, some minor modifications) the description "which one will inevitably find in practically every work on regime theory."[8] While it has been criticised from the very outset for its "wooliness" and "imprecision",[9] it has nonetheless provided the basis from which discussions of regimes tend to proceed. Only recently it was correctly noted that

> for all its alleged flaws, the consensus definition has significantly promoted research by providing practitioners of regime analysis with a valuable analytical tool or, at the very least, a salient, non-arbitrary point of departure for further specifying their object of study.[10]

Despite Krasner's definition providing a useful starting point, this discussion (like so many others) will proceed as much from its apparent failings as from its successes.

During the past two decades, regime theory has developed enormously. Its American originators and much of the literature were occupied primarily with the need to illustrate that, in contrast to the tenets of a neo-realist framework,

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[8] Gerd Junne, "Beyond Regime Theory," *Acta Politica*, vol.27, 1992, p.13. Another regime theorist spoke of Krasner's definition of being "widely accepted" in spite of criticisms levelled at it for being somewhat vague (see Volker Rittberger, "Research on Regimes in Germany" in *Regime Theory and International Relations,* (Oxford: Oxford University Press; 1993), p.9). Nonetheless, Krasner's definition provides the starting point not only for the 1982 edition of *International Organization,* but also for Oran R. Young, who notes the "remarkable achievement" of such consensus, before going on to criticise it (see "International Regimes: Toward a New Theory of Institutions," *World Politics,* vol.39, no.1, October 1986, pp.105-108. In addition, the definition was broadly accepted in other articles, such as Peter F. Cowhey and Edward Long, "Testing theories of regime change: hegemonic decline or surplus capacity," *International Organization,* vol.37, no.2, Spring 1983; Roger K. Smith "Explaining the non-proliferation regime: anomalies for contemporary international relations theory," *International Organization,* vol.41, no.2, Spring 1987; Peter Van Ham, "The Lack of a Big Bully: Hegemonic stability theory and the study of regime in international relations," *Acta Politica,* vol.27 1992; Marc A. Levy, Oran R. Young and Michael Zurn, "The Study of International Regimes," *European Journal of International Relations,* vol.1, no.3, September 1995.

[9] Susan Strange, "*Cave! Hic Dragones:* A Critique of Regime Analysis," *International Organization,* vol.36, no.2, Spring 1982, p.343. In this article Strange criticised not only Krasner's definition, but the methods and utility of regime theory generally.

[10] Andreas Hasenclever, Peter Mayer, and Volker Rittberger, *Theories of International Regimes,* (Cambridge: Cambridge University Press; 1997), p.11. Harald Müller referred to these four components as "the building blocks set out by regime theory" ("er [the article] bescheibt sodann die von der Regimetheorie prognostizierten Regimebausteine – Prinzipien, Normen, Regeln und Prozeduren und ihr Ineinandergreifen" [and their interconnection].) In "Regimeanalyse und Sicherheitspolitik: Das Bespiel Nonproliferation," in Beate Kohler-Koch (ed.), *Regime in den Internationalen Beziehungen,* (Baden-Baden: Nomos; 1989), p.278.

international regimes mattered.[11] A variety of theories soon developed in an attempt to explain the creation, maintenance and/or demise of an international regime. These tended to be a reflection in miniature of the ongoing – and overarching – neo-realist/neo-liberal debate. In addition, the idea of "cognitivist" theories of international regimes also had their beginnings in 1975 and, though overshadowed by the other debate for much of the 1980's, grew in popularity in the following decade.[12] This division of regime theory into three broad categories has been generally accepted and have been perhaps best, and most simply, identified as realist, neo-liberal, and cognitivist branches of regime theory.[13]

The broader history of regime theory is, for the purposes of this discussion, secondary to the question of how much space regime theory tends to make for the role and existence of regime change and the manner in which regimes develop after their formation. For this reason, these three approaches will be discussed in greater detail to identify their various understanding of regime change and development.

Krasner's Definition and the Question of Regime Change:

Before doing so, Krasner's definition will be briefly examined in the context of its implications for the question of change. Krasner's definition of a regime as "sets of implicit or explicit principles, norms, rules and decision-making procedures

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[11] See especially *International Organization,* vol. 36, no.2, Spring 1982. Robert O. Keohane went so far as to assert that "American literature on international regimes has been shaped – one might say distorted – by its advocates' theoretical struggles with neo-realists, as represented by Kenneth Waltz." (See Robert O. Keohane, "The Analysis of International Regimes," in Rittberger (ed.), *Regime Theory and International Relations,* p.29.

[12] Haas, "Is There a Hole in the Whole?"

[13] This is typified most recently in Hasenclever et.al., *Theories of International Regimes.* Others, such as Stephen Haggard and Beth A. Simmons, have cited the game-theoretic approach to the study of international regimes as occupying its own category (see Stephen Haggard and Beth A. Simmons, "Theories of International Regimes," *International Organization,* vol.41, no.3, Summer 1987, pp.491-

around which actor expectations converge in a given area of international relations" elaborated on those four variables, stating that

> principles are beliefs of fact, causation, and rectitude. Norms are standards of behavior defined in terms of rights and obligations. Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice.[14]

However, Krasner also acknowledged the possibility of regime change in the context of this definition. Change within a regime – superficial change – he identified as involving only the alteration of the rules and decision-making procedures of the regime. 'Genuine' regime change, however, involves a deeper change to the norms and principles of the regime.[15] While the validity of the Krasner's distinctions between principles, norms, rules and decision-making procedures has been questioned, this conception of regime change is nonetheless useful. A worthwhile discussion of how the nonproliferation regime developed over time requires that significant, substantial regime change be distinguished from merely the addition or subtraction of a few rules and procedures (although changes in the norms and principles of a regime are usually accompanied by significant changes in rules and decision-making procedures).

For the purposes of the following discussion and for the purposes of retaining the usefulness of Krasner's description of regime change, we need to make a further distinction between what may be called primary and secondary regime norms and principles. Primary, or foundational norms and principles of a regime are those which

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517). Hasenclever et.al., placed game theory under the general heading of interest-based approaches, citing it as "an attempt at extending and further developing...[the] interest-based argument" (p.44).

[14] Krasner, "Structural Causes and Regime Consequences," p.186.

cannot change without undermining and thus destroying the very purpose of the regime itself. The fundamental principle of the nonproliferation regime is one which assumes that nuclear proliferation is inherently a dangerous thing and that the possibility of nuclear war is raised with the number of states who acquire nuclear weapons. A change to these principles, clearly, undermines the whole basis upon which the nonproliferation regime is founded. Similarly, the fundamental norm of the NPT requires that non-nuclear states not seek to obtain nuclear weapons and the nuclear weapons states not give others nuclear weapons or otherwise assist them in attaining a nuclear weapon capability. A change to this norm would also nullify the rationale behind a nuclear nonproliferation regime. While there may be other, secondary norms and principles behind the regime which are subject to change (the possibility of which is to be explored), there are clearly primary norms and principles which cannot change if the regime is to be maintained. Nonetheless, Krasner's distinction between 'superficial' and 'genuine' regime change will be accepted and used as the criteria upon which the occurrence of 'genuine' regime change may, or may not, be demonstrated.

This is not to say that Krasner's definitions are to be accepted unconditionally. Perhaps most notably, the definition implies but makes no specific mention of the existence of institutions in which these other four variables are embodied. Moreover, and despite his acknowledgement of the existence of regime change, the consensus definition set the tone for what will be later demonstrated to be a disinterest in regime change in regime theory, or an assumption of its absence. The claim that the four components of a regime are those "around which actor expectation converge in a

[15] Ibid., pp. 187-89. Krasner states that "change within a regime involves alterations of rules and decision-making procedures, but not of norms or principles; change of a regime involves alteration of norms and principles" (p.189).

given area of international relations"[16] implies from the outset that such expectations come to be fixed. The definition makes no indication of the possibility that such expectations could diverge and then reconverge as part of a regime's overall development. In spite of a discussion of regime change, then, the consensus definition of an international regime may already be seen to incline away from change.

Regime Theory and the Question of Change – the Realist Approach:

The concept of 'hegemonic stability' is one of the more familiar approaches to the study of international regimes. Although the acceptance that regimes 'mattered' jarred with the theoretical inclinations of neo-realism, hegemonic stability theory (HST) allowed for some level of reconciliation between the two. While accepting that regimes did matter, HST rooted itself firmly in the tradition of power politics.

HST did not, interestingly, have its origins in power politics, but rather in the world of international economics and the work of Charles Kindleberger in particular.[17] Kindleberger's thesis proposed that hegemonic powers, desiring economic stability, endeavour to advance it through regimes and other means, even if there is some risk and cost to them in so doing. HST claimed that international public goods are unlikely to exist unless "a single state has sufficient interest in the goods to be willing to bear the full costs of its provision."[18] The hegemon, in this version of HST was seen as proffering a collective good by creating stability.

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[16] Ibid., p.186.

[17] Charles P. Kindleberger, *The World in Depression 1929-1939*, (London: Allen Lane, the Penguin Press; 1973). Kindleberger later reiterated his views in an article entitled "Systems of International Economic Organization" in David Calleo (ed.), *Money and the Coming World Order,* (New York: New York University Press; 1976).

[18] Duncan Snidal, "The limits of hegemonic stability theory," *International Organization,* vol.39, no.4, Autumn 1985, p.581.

In contrast to this optimistic view of the benefits to be reaped from the existence of a hegemon was the idea of the coercive hegemon. Snidal wrote of the tendency in HST "to lump together quite different, though partially compatible, theoretical orientations."[19] In a more obviously power politic version of HST cited by those such as Krasner and Gilpin, the ability of the hegemon to force and maintain (economic) stability was emphasised.[20] The hegemon, in this view, was far removed from the more benevolent version proposed by Kindleberger.

Despite its initial existence in the realm of international economics, HST found wider application in regime analysis. Happily, the interest of a hegemon provided a neat explanation for the creation, survival, or decay of a regime in an otherwise anarchic international system. Linking HST and international regimes in a 1980 article, Robert Keohane observed that, insofar as the study of international regimes was concerned, HST "is clearly useful as a first step; to ignore its congruence with reality, and its considerable explanatory power, would be foolish."[21]

HST, particularly when applied to international regimes, has not remained free of criticism. Its utility is especially in doubt in regard to regime change. As an analytical model, it has been rightly charged with being "fundamentally static in nature."[22] HST is, by definition, concerned to investigate stability or its absence.

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[19] Ibid., p.585.

[20] See Stephen Krasner, "State Power and the Structure of International Trade," *World Politics,* vol.28, April 1976. A year previous to Krasner's article, another had argued in favour of the hegemon as primarily coercive: Tom Baumgartner and Tom Burns, "The Structuring of International Economic Relations," *International Studies Quarterly,* vol. 19, June 1975. Gilpin, for his part, directed his attention not to international regimes as such, but towards the international system as a whole and the tendencies of a hegemon to structure the international system exclusively for their own benefit. See Robert Gilpin, *War and Change in World Politics,* (Cambridge: Cambridge University Press; 1981), as well as *The Political Economy of International Relations,* (Princeton, N.J.: Princeton University Press; 1987).

[21] Robert Keohane, "The Theory of Hegemonic Stability and Changes in International Economic Regimes," in O Holsti, Robert Siverson and A. George (eds.), *Change in the International System,* (Boulder, Colorado: Westview Press; 1980).

When taken outside the realm of economics and used as a tool in regime analysis, it has served as a means by which to explain the reason for the existence of a regime in the world of self-interested states.

Such a concern therefore mitigates against HST as a useful means for drawing conclusions as to how regimes change and develop over time. Change is characterized merely as a consequence of the whims of the hegemonic power. In the context of regime theory, HST asserts that "regimes are established and maintained by actors who hold a preponderance of power resources...and that regimes decline...when power becomes more equally distributed among their members."[23] The use of HST in regime theory seeks to answer 'grander', structural questions as regards the existence of a regime – what brought it about, what maintains it, what destroys it. However, whether or not the hegemon decides to implement or prevent change, the theory says very little about the manner, extent, and process of that change. The prominence of the idea of regime maintenance involves no exploration of the processes behind that maintenance – whether and why the regime, once established, retains its form or changes throughout its existence. HST, in the words of one author, is "not very useful in telling us what actors did in order for system to move from point A to point B."[24] In focusing on the existence of regimes, HST has little interest in looking within. As a consequence, it is "less useful for understanding processes than for establishing correlations."[25] Thus the application of this power-based approach to regime theory

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[22] Snidal, "The Limits of Hegemonic Stability Theory," p.584.

[23] Hasenclever et.al., *Theories of International Regimes*, p.90. As the authors note, this is the manifestation of HST as it is applied to the study of regimes. In its original form, Kindleberger's primary concern was with the international economic sphere – an arena of which international (economic) regimes were only a part. The same was true of Gilpin's *War and Change in World Politics* and *The Political Economy of International Relations*.

[24] Timothy J. McKeown, "Hegemonic Stability Theory and 19th Century Tariff Levels in Europe," *International Organization*, vol.37, no.1, Winter 1983, p.79.

appears to shed no light on, and express no concern with, the question of regime change.[26]

The emphasis on issues of regime formation, maintenance, and demise which come at the expense of a concern with process are not confined to HST, but pervade other power-based approaches to international regimes. The authors of these approaches, which surfaced in the late 1980's and early 1990's, addressed what they viewed as the inadequacies of the neo-liberal (liberal-institutionalist) understanding of international regimes.[27] Power, it was argued, had been unnecessarily expelled from the discussion. In the debate between the self-appointed "two schools" of international relations theory, it was charged that neo-liberalism "fails to address a major constraint on the willingness of states to cooperate which is generated by international anarchy and which is identified by realism."[28] In a 1993 article on the subject, Krasner maintained that "regime analyses based upon market failure inevitably obscure issues of power."[29] The neo-liberal method by which to understand regimes (of which more will be said in the next section) was charged with

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[25] Haggard and Simmons, "Theories of International Regimes," p.502.

[26] It should be noted that HST has also been subject to charges of being constrained by its American ancestry and thus of being blinkered. HST has been identified as holding great appeal for the hegemonic power in question, and it has been argued that it is no coincidence that the proponents of this theory has hailed from the United States. (See, for example, Susan Strange's article: "The Myth of Lost Hegemony," *International Organization,* vol.41, no.4, Autumn 1988. It was elaborated upon a couple of years later by Isabelle Grunberg, who observed that "to some extent, the theory of hegemonic stability has a built-in, ethnocentric bias simply in the sense that it links the fate of the world with that of the United States." See Isabelle Grunberg, "Exploring the 'myth' of hegemonic stability," *International Organization,* vol.44, no.4, Autumn 1990, p.447).

[27] A detailed overview of these non-HST approaches to the analysis of international regimes may be found in Hasenclever et.al., Chapter 4.

[28] Joseph Grieco, "Anarchy and the limits of cooperation: a realist critique of the newest liberal institutionalism," *International Organization,* vol.42, no.3, Summer 1988, p.487.

[29] Stephen Krasner, "Global Communications and National Power: Life on the Pareto Frontier," *World Politics,* vol.43, no.3, April 1991, p.336.

having neglected the fundamental role of power as the means by which a regime may be coordinated.[30]

It should be noted here that these later realist critiques centred around the perceived limitations in these understandings of *cooperation*. However, while international regimes are an undoubted indicator of cooperation, it is equally clear that cooperation may occur in the absence of the creation of a regime. For instance, adherents to the power-based approach to international regimes such as Grieco argued against the neo-liberal approach on the grounds "that it [cooperation] is harder to achieve and more difficult to maintain than the institutionalist tradition suggests."[31] Such a statement has obvious implications primarily for the possibility of regime *formation*. Krasner, in his attempt to bring power back to into the equation wrote of the reasons behind the failure to create a global communications regime. What apparently links these two strains of realist regime analysis is the continuing, almost obsessive desire to reconcile the role of power in an anarchic system with the existence of cooperation which in turn underlies the establishment and maintenance of a regime. The realist approach to international regimes, according to Krasner, seeks to affirm that "international regimes are created to promote the interests of particular actors. Regime creation and maintenance are a function of the distribution of power and interests among states."[32] Regime formation, as well as regime maintenance and termination, are again the focus for investigation and the emphasis, as in HST, is on

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[30] This was also pointed out by Geoffrey Garrett, "International Cooperation and Institutional Choice: The European Community's Internal Market," in John Gerard Ruggie, *Multilateralism Matters: The Theory and Praxis of an Institutional Form,* (New York: Columbia University Press; 1993).

[31] Joseph Grieco, "The Relative-Gains Problem for International Cooperation: Comment," in *The American Political Science Review,* vol.87, no.3, September 1993, p.729.

[32] Stephen Krasner, "Sovereignty, Regimes, and Human Rights," in Volker Rittberger (ed.), *Regime Theory and International Relations,* (Oxford: Clarendon Press; 1993), p.140. Krasner goes on to argue that the power-based approach provides a better understanding than its liberal counterpart of why certain international regimes on human rights have been maintained (adhered to).

providing an explanation for structure, not for process. Moreover, both versions of a realist regime analysis approach take as given the existence of exogenous preferences which are fixed. Such an approach could explore the question of regime change in the context of changed relative capabilities of regime actors and their effect on the structure of the regime, if not the processes behind its development.
However, although realism does not preclude the possibility of alteration either in interests or power, this ingrained bias towards stability appears to have mitigated against a sympathy towards the investigation of change in practice. More important still, such an approach ignores the possibility that continued stability actually requires change: if a regime is to remain relevant to, and useful in, a changing international environment, it *must* adapt to external changes in that environment.

Regime Change and Game Theory:

Although game theory has been consistently used in regime analysis, it has usually been subsumed into neo-liberal or realist approaches when seeking to explain the desire for cooperation between states, of the sort which might lead to the formation of a regime. It was observed by Kydd and Snidal that those games most commonly cited in regime analysis have been "directed towards general issues of cooperation and [were] insufficiently attuned to the specific role of regimes as institutions."[33] Nonetheless, attempts to project from game to regime found support, and shall therefore be considered separately, and briefly, here.

A dichotomy between two 'styles' of games – those characterised by an emphasis on collaboration (for example, Prisoners Dilemma, Assurance) and those characterised by an emphasis on coordination (for example, Battle of the Sexes) – was

first discussed in the context of international regimes by Arthur A. Stein, in 1983.[34] This division once again reflected the broader realist/neoliberal debate, with those of a realist bent (Krasner) arguing for the utility of coordination games in understanding regimes and those of a neoliberal persuasion (Keohane) arguing in favour of collaborative games.[35] It is not, for the purposes of this discussion, necessary to go into the finer points of these games or game theory generally. It is simply important to note that the use of game theory in regime analysis was, ultimately, to focus on regime formation by providing yet another means by which to reconcile the apparent contradiction between international cooperation in a world of utility-maximising states. It again sought to provide "a complete understanding of how and why regimes are created."[36] Game theory focuses on the processes that precede the formation of a regime in an attempt to explain a states' motivation for involving themselves.

Such attempts to resolve this collective action problem and thereby explain the attractiveness and consequent formation of international regimes were periodically cited as useful in commentaries by Snidal, Oye, Krasner, and Keohane among

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[33] Andrew Kydd and Duncan Snidal, "Progress in Game-Theoretical Analysis of International Regimes," in Rittberger, *Regime Theory and International Relations,* p.113.

[34] Arthur A. Stein, "Coordination and Collaboration: Regimes in an Anarchic World," in Stephen D. Krasner, *International Regimes,* (Ithaca: Cornell University Press; 1983). More recently, others have identified further game-theoretic approaches to regime: 'assurance' and 'suasion'. (See Michael Zurn, "Problematic Social Situations and International Institutions: On the Use of Game Theory in International Politics," in Frank R. Pfetsch (ed.), *International Relations and Pan-Europe: Theoretical Approaches and Empirical Findings,* (Münster: Lit.; 1993). Also see Lisa Martin, "The Rational State Choice of Multilateralism," in Ruggie, *Multilateralism Matters.* Prisoners' Dilemma and the Battle of the Sexes (the collaboration/coordination binary have, however, dominated the game-theoretic approach to regimes, and will thus take precedence in this brief overview. Games such as Chicken may, interestingly, be resolved successfully as a consequence of the two players collaborating or coordinating. The only unsuccessful outcome (from the perspective of both players, comes about if each defects).

[35] See Krasner, "Global Communications and National Power: Life on the Pareto Frontier," and Robert O. Keohane, "The demand for international regimes," *International Organization,* vol.36, no.2, Spring 1982.

[36] Hasenclever et.al., *Theories of International Regimes,* p.50.

others.[37] This concern was not merely to provide an explanation for the creation of a regime but, more ambitiously, to account for the varying regime structures (or forms) which arise from a game. Snidal, for example, identified the utility of Prisoner's Dilemma (PD) as highlighting the role of regimes in facilitating cooperation, but argued for a better use of coordination games in order to answer "the fundamental question of what sorts of regimes are appropriate for solving particular problems."[38] The same is true in the application of the Battle of the Sexes to regime analysis, where the concern once again is to use a game to demonstrate what it is, exactly, that regimes do and thus why they are created. Krasner, citing the need to incorporate dilemmas of common aversion as well as those of common interest, highlighted the ability of the Battle of the Sexes game to explain not simply the fact of a regime's creation, but the form it takes. As Krasner noted, "the problem is not how to get to the Pareto frontier but which point along the frontier will be chosen."[39] The Battle of the Sexes game has likewise been used to demonstrate that the ability of a regime to facilitate a coordination of policy explains its existence.

As a tool for regime analysis, game theory has therefore been concerned solely to demonstrate the role of a regime in making possible either collaboration or coordination between actors. Its focus, much like HST, lies on the initial establishment of an international regime. At best, this focus allows game theory to "suggest conditions conducive to stable compliance, but...[to] have difficulty

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[37] Duncan Snidal, "Coordination Versus Prisoners' Dilemma: Implications for International Cooperation and Regimes," *The American Political Science Review,* vol.79, no.4, December 1985; Kenneth A. Oye, "Explaining Cooperation Under Anarchy: Hypotheses and Strategies," in Kenneth A. Oye (ed.), *Cooperation Under Anarchy,* (New Jersey: Princeton University Press; 1986); Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy,* (Princeton, New Jersey: Princeton University Press; 1984), see especially Chapter 5.

[38] Snidal, "Coordination Versus Prisoners' Dilemma," p.923 and 926. It is this perceived ability of game theory to use the purpose of a regime as a way of explaining its existence which endeared it to functionalists such as Keohane (discussed in the next section).

explaining organizational form, scope or change.[40] Moreover, game theory again assumes the existence of static, given interests (specified at the onset of the game) which, even were it not confined to concentrating on questions of the formation and function of regimes, inclines away from an ability to address regime change. Game theory may be used to explain why collaboration/coordination – resulting in a regime – occurs and continues, but is of little use in understanding any changes that occur after a regime's establishment.

Finally, game theory takes as a given the existence of a situation upon which the game may be built. This therefore requires that the situation remain stable in order for the game to continue. A change in interests would require a new game, just as the maintenance of the regime would require a compliance with the situation established at the outset of the regime's creation.[41] As a consequence, game theoretic approaches to regime theory are ill-disposed towards an understanding of how, and in what way, the established regime might change internally without itself collapsing.

Regime Change and the Neo-liberal approach:

As stated earlier, the debate between the two main forms of approach to the analysis of international regimes tended to reflect the neorealist and neoliberal discussions of international relations generally. In spite of this wider debate, both these approaches to regimes have certain tenets in common. Both start from a premise that regimes are founded on the belief by its participants that joining the regime would maximise their (exogenously given and stable) interests. The neoliberal

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[39] Krasner, "Global Communications and National Power," p.340.

[40] Haggard and Simmons, "Theories of International Regimes," p.504.

approach to regimes places much less emphasis on the centrality of power. Although its proponents claimed it as a more subtle, and more effective, way by which to understand various aspects of international regimes, issues of regime change and development once again barely figure in their deliberations.

In its initial form, from roughly 1984 to 1989, this approach consisted of a method of analysis formulated by Robert Keohane known as 'contractualism'.[42] This was articulated in the book *After Hegemony,* in which the formation of international regimes was explained in terms of the role (function) that they serve. Regimes, Keohane argued, are formed as a consequence of their perceived ability to "reduce transaction costs of legitimate bargains and increase them for illegitimate ones."[43] This approach eschewed the realist conviction that desire for cooperation is undermined by the simultaneous desire to prevent others from achieving the benefits that a regime might bring. Instead, the contractualist approach developed by Keohane in 1984 explained the formation of regimes simply as a product of the capacity of a regime to "permit governments to attain objectives that would otherwise be unattainable."[44]

This explanation of regime formation and persistence – as a function of the reduced cost of bargaining that a regime provides – appeared to find favour in

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[41] Nor, too, is such change allowed for by the possibility of iterated games, since iterated games continue to assume that interests remain as agreed upon in the first game. Consequently, change as a consequence of new interests cannot be accounted for without starting a new game.

[42] 'Contractualism' was not the original term used by Keohane. Rather, he termed this approach 'functionalism'. The unrelated existence, in sociology, of a methodology also known as 'functionalism' eventually inclined Keohane towards a different moniker. As he explained in a 1993 essay, "since that phrase [functional theory] carries connotations of sociological functionalism, with which I do not identify, I now use the language of 'contractualism' rather than 'functionalism'. (See Robert O. Keohane, "The Analysis of Regimes: Towards a European-American Research Programme," in Rittberger et.al., *Regime Theory and International Relations,* p.36.

[43] Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy,* (Princeton, N.J.: Princeton University Press; 1984), p.90.

[44] Ibid., p.97.

publications which followed immediately on the heels of Keohane's proposal. In speaking of the creation of the regime surrounding the textile trade, Aggarwal noted the advantages of one regime over many different bilateral agreements. In highlighting these advantages, Aggarwal explained the formation of the textile trade regime by the function it served.[45] Kenneth Oye also adopted this kind of interest-based approach, explaining regime formation in the context of the utility of regimes in facilitating communication.[46]

What characterizes this conception of international regimes is the desire, much like the realist approaches, to explain the presence of a regime – in particular the reasons for its formation and, to a lesser extent, its persistence or decline. Keohane's original designation of this branch of regime theory as 'functionalism' thus aptly identifies perfectly its concerns, and itself had its origins in the work of David Mitrany in the 1930's and 1940's.[47] Nearly a decade after the publication of *After Hegemony,* the author himself observed that "explaining regime formation is one of the most important contributions of this theory."[48] It seeks primarily to explain the creation of a regime by emphasising a state's recognition of the benefits (especially in terms of problem-solving) that regime membership would bring. Implicitly, this then explains the maintenance/persistence of the regime (it continues to function as a

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[45] Vinod Aggarwal, *Liberal Protectionism: The International Politics of Organized Textile Trade,* (Berkeley: University of California Press; 1985).

[46] Kenneth Oye, "Explaining Cooperation Under Anarchy: Hypotheses and Strategies," in Kenneth A. Oye (ed.), *Cooperation Under Anarchy,* (Princeton, N.J.: Princeton University Press; 1986).

[47] Mitrany's idea of a functional theory of International Organizations was first put forward in 1932 at the 3rd of the Dodge Lectures at Yale. He later articulated his concern as seeking to create and facilitate effective international organizations and believed that his functional approach would "help to mitigate the obstinate problem of equal sovereignty" (See David Mitrany, "The Functional Approach to World Organization," in *International Affairs*, vol.24, no.3, July 1948, p.358.). Also see David Mitrany, *The Functional Theory of Politics,* (London: Martin Robertson & Company, Ltd.; 1975). It is from such beginnings that the (neo)functionalism of Keohane and others emerged in the 1970's and was applied to international regimes.

[48] Keohane, "The Analysis of International Regimes," p.36 (footnote 7).

means by which the state's interest in reducing transaction cost and facilitating agreement is fulfilled). In addition, the approach formulated by Keohane has further implications for the reasons behind the demise of the regime: it ceases to function as an effective means by which to reduce transaction costs and facilitate agreement. This means that the question of change within a regime, or the manner of a regime's development between its creation and demise remain unaddressed by this branch of the interest-based approach. Any concern with regime change, as Haggard and Simmons noted, manifests only in a concern to "try to explain why regimes eventually weaken or decay."[49]

The decision to explain regimes in terms of the function they serve (leading to their formation), continue to serve (maintenance), or cease to serve (demise) rests once again on the assumption of fixed interests in a fixed environment. The regime functions, and is thus created, to satisfy these interests; it persists if it continues to satisfy these interests in this environment; it collapses when fails to satisfy these interests. Given this emphasis on the stability of actor interests (or, as in Krasner's definition, the convergence of actors' "expectations"), the tendency to underestimate and even ignore variations in the process behind the structure is hardly surprising.

More recently, neoliberal regime theory was expanded to include an approach which was identified by its creator as "institutional bargaining." This offshoot was introduced into the discussion in a 1989 article by Oran Young.[50] Institutional

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[49] Haggard and Simmons, "Theories of International Regimes," p.496.

[50] Oran R. Young, "The politics of international regime formation: managing natural resources and the environment," *International Organization,* vol.43, no.3, Summer 1989. Young's approach as a type of neoliberalism is inherent in its assumption of states as utility-maximising rational actors who, as Hasenclever et.al. note "are confronted with both the *possibility* of achieving joint gains from effectively coordinating their behavior and the *difficulty* of settling upon a specific set of norms and rules for that purpose." (Hasenclever et.al., *Theories of International Regimes,* pp.68-69). It is for this reason that Young's approach to regimes is included under the, fortunately large, neo-liberal umbrella. In other works, Young has taken more of a 'cognitivist' approach with an emphasis on regime dynamics (which will be discussed in the next section). Young has, for instance, observed that regimes

bargaining was intended as another means by which the formation of international regimes, or the lack thereof, could be explained. As its central concern, Young sought "to illuminate the process of regime formation in international society."[51] Very simply put, the uncertainty among potential regime participants, as regards their strategic options and the variation in the potential benefits of their outcomes, will incline them towards what Young labels 'integrative bargaining' in their quest to establish a regime. A state, desiring not to reduce inadvertently the rewards it might gain from a regime – due to imperfect information in the bargaining process – will "have compelling incentives to engage in exploratory interactions to identify opportunities for devising mutually beneficial deals."[52] Importantly – given the subject of the investigation – Young explicitly made reference to a relationship between international regimes and shocks, claiming that "exogenous shocks or crises frequently play a significant role in breaking...logjams and propelling parties toward agreement on the terms of institutional arrangements."[53] Despite identifying the potential importance of shocks, however, Young did so in order to identify factors aiding the success or failure of the institutional bargaining which in turn leads to the formation of a regime.

"evolve continuously in response to their own inner dynamics as well as change in the political, economic, and social environments" (see Oran R. Young, *International Cooperation: Building Regimes for Natural resources and the Environment* (Ithaca: Cornell University Press; 1989). Following the publication of the 1989 *International Organization* article, however, Young has tended to lean more towards a neo-liberal approach, the assumptions of which informed his theory of institutional bargaining.

[51] Oran R. Young, "The Politics of Regime Formation: managing natural resources and the environment," p.349. Young himself defined institutional bargaining as "efforts on the part of autonomous actors to reach agreement among themselves on the terms of constitutional contracts or interlocking sets of rights and rules that are expected to govern their subsequent interactions." (See Oran R. Young, "Political leadership and regime formation: on the development of institutions in international society," *International Organization,* vol.45, no.3, Summer 1991, p.282.

[52] Ibid., p.361.

[53] Oran R. Young, "The politics of international regime formation," pp.371-72.

Young reiterated and refined his method of regime analysis several times in the years following his initial article on institutional bargaining. In each instance the question of the circumstances of regime formation took centre stage. In 1991, for example, Young added political leadership to his list of necessary variables which influenced the success of institutional bargaining, and therefore regime formation.[54] With Gail Osherenko, institutional bargaining was again proposed as a theory of regime formation, confirming this form of regime theory's disinterest in questions of post-formation regime change and development.[55]

Although Young's model of institutional bargaining is, to an extent, concerned with process, he concentrates on the processes preceding the establishment of regime. Once established, institutional bargaining, like HST, is theoretically inclined to viewed the regime as essentially fixed or in decline. According to institutional bargaining, the state – uncertain as to its own eventual gains from the regime – seeks to hedge its bets by ensuring the regime will be mutually beneficial. This presupposes that the regime, once established, is fixed (and that therein lies the need to ensure, during the formation process, that all participants will benefit). Change within the established regime is thus not simply unaddressed by, but also incompatible with, the assumptions of institutional bargaining.

As in the case of realism and game theory, the neoliberal approach to the study of international regimes ignores both practically and theoretically the question of post-formation regime development and change in favour of an account of formation, persistence, and demise of the structure of the regime itself. The contractualism proposed by Keohane overtly emphasises regime formation in terms of its effect, or

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[54] Young, "Political leadership and regime formation".

[55] Oran R. Young and Gail Osherenko (eds.), *Polar Politics: Creating International Environmental Regimes,* (Ithaca: Cornell University Press; 1993).

function. By extension, the continuing ability or failure of the regime to provide the advantages which prompted its formation may be used to explain the maintenance or collapse of the regime as a whole. In short, institutional bargaining, much like Keohane's contractualism and realist analyses, concentrates on justifying the existence of regimes. In emphasising the ability of a regime to satisfy a state's desire to ensure and entrench a mutually beneficial agreement, the assumption is therefore made that once established, the regime will be unchanging.

Regime Change and Cognitivism:

It has thus far been argued that most 'mainstream' regime theory has evidenced little interest in, and made little provision for, an exploration of regime change. In preferring to focus on structure (particularly the antecedents for a regime's formation) rather than on process, the approaches discussed are unhelpful to an investigation into regime change, and the role that shocks play in its initiation. Mainstream regime theory is bound by its assumption of exogenously-given, fixed interests. A regime either continues to fulfil those given interests (in which case the regime which entrenched them continues to exist) or it does not (in which case, it follows, the regime collapses). Since fixed interests cannot, by definition, grow and adapt within a regime which has cemented them, then neither may the regime itself.

Another approach to the study of international regimes, however, seeks to supplement or even replace the realist/neoliberal theories which have generally held sway. Known variously as cognitivist or knowledge-based methods of regime analysis, this third group of regime theorists became established as an alternative to

mainstream regime theory by the beginning of 1990's, taking up the concern with regime development which had surfaced, albeit briefly, in the late 1970's.[56]

The cognitivist approach to regimes, as the name implies, examines international regimes with an emphasis on the roles of ideas, knowledge and learning. Although there are noteworthy difference among the various proponents of this approach, all share a belief in the need to highlight the role of knowledge.[57] Furthermore, all share a concern not only with the broader structural questions of regime analysis (and mainstream regime theory's apparent inability to answer them), but an equally strong concern with process and the question of the dynamics of an established regime. The centrality of knowledge – its acquisition, interpretation and diffusion – have allowed this approach to be correctly described by one author, "particularly important in explaining the substantive content of regime rules and why they evolve."[58]

The cognitive challenge to regime analysis was encouraged by the bickering in the 1980's between the neorealist and neoliberal camps. Kratochwil and Ruggie, in 1986, argued for "a more interpretive approach that would open up regime analysis to the communicative rather than the merely referential function of norms in social interactions."[59] Disquiet with the accepted notion that regimes could be understood strictly as a product of the rational choices of states led to a desire to highlight "the

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[56] Keohane and Nye, *Power and Interdependence.*

[57] Some such as Hasenclever et.al., subsequently divide this branch of regime theory into weak cognitivists (those who wish to enhance mainstream analysis) and strong cognitivist (those who desire that the mainstream be replaced entirely). Although such a dichotomy is tempting, it is not altogether obvious where, precisely, the line between the two should be drawn. The following discussion, therefore, will simply aim to provide an overview of cognitivist regime theory generally, without attempting to subcategorise it further.

[58] Haggard and Simmons, "Theories of international regimes," p.510.

[59] Friedrich Kratochwil and John Gerard Ruggie, "International Organization: A State of the Art on an Art of the State," *International Organization*, vol.40, no.4, Autumn 1986, p.774.

flexibility and structural indetermination of many notions that are frequently taken as given and assumed to be stable."[60] Mainstream regime theory, as Wendt noted, had been fated to ignore the question of change because "regimes cannot change identities and interests if the latter are taken as given."[61] According to this approach, interests are neither exogenously given nor fixed, but may be altered by the changing understanding of those interests which is inspired by new knowledge and/or a new environment.

The importance of change is thus central to the assumptions of this approach, regardless of whether the goal is to complement mainstream regime theory or to replace it. In the words of one of the key proponents of this notion, "social sciences have done relatively well at developing theories to explain periods of order and stability, but have done less well at explaining the dynamics of periods of change."[62] More radical forms of this approach equally considered the lack of fixed interests and the resultant likelihood of regime change to be important as well and accepted the possibility – highlighted above – that regimes must change in order to remain relevant to a changing international environment. Neufeld proposed that, rather than fixing interests permanently, international regimes were constantly undergoing a process of international renegotiation and reinterpretation.[63] Kratochwil and Ruggie, for their part, declared that international regimes "are conceptual creations, not concrete

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[60] Thomas Gehring, *Dynamic International Regimes: Institutions for International Environmental Governance,* (Frankfurt am Main: Peter Lang; 1994), p.56.

[61] Alex Wendt, "Anarchy is what states make of it: the social construction of power politics," *International Organization,* vol.46, no.2, Spring 1992, p.393.

[62] Peter M. Haas, *Saving the Mediterranean: The Politics of International Environmental Cooperation,* (New York: Columbia University Press; 1990), p.xviii.

[63] Mark Neufeld, "Interpretation and the 'science' of international relations," in *Review of International Studies,* vol.19, no.1, 1993, p.55.

entities"[64], indicating their concern to understand the occurrence and likelihood of regime change. Harald Müller, in an article which focused on the nuclear nonproliferation regime, drew attention to the "dynamic further development of the regime structure according to changed environmental conditions."[65]

The existence of such assumptions were most obviously emphasized by those cognitivists who, in attempting to complement pre-existing regime theory, focused upon the impact of 'epistemic communities' which supported international regimes. Described by Haas as a "network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area"[66], the epistemic community was identified as a body through which the diffusion of new knowledge could take place. Epistemic communities are important by virtue of their ability to shape the perceptions of the decision-makers.[67] As a consequence, "the diffusion of new ideas and information can lead to new patterns of behavior and prove to be an important determinant of international policy coordination."[68] While the spread of new knowledge is emphasised in terms of the creation of a regime, the role of new knowledge and subsequent change to the established regime is not merely allowed

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[64] Kratochwil and Ruggie, "International Organization: A State of the Art on an Art of the State," p.763.

[65] Müller, "Regimeanalyse und Sicherheitspolitik," in Kohler-Koch (ed.), *Regime in den internationalen Beziehungen,* p.278. Müller wrote of "die dynamische Weiterentwicklung der Regimestruktur nach Maßgabe veränderter Umweltbedingungen."

[66] Peter M. Haas, "Introduction: Epistemic Communities and International Policy Coordination," *International Organization,* vol.46, no.1, Winter 1992, p.3. The premise underlying the influence of the epistemic community is that decision-makers recognise the limitations of their own knowledge and call upon the assistance of those with specific expertise in the issue-area in question.

[67] These perceptions are cited by Haas and Adler as manifesting in the innovation, selection, diffusion and persistence of policy (see Peter M. Haas and Emanuel Adler, "Conclusion: epistemic communities, world order, and the creation of a reflective research program," *International Organization,* vol.46, no.1, Winter 1992.

[68] Ibid., p.5

for, but explicitly acknowledged.[69] "Incremental change," Hopkins observes, "can occur when consensual views of an epistemic community diverge from the politically modal position of the supporters of a policy."[70] Taking the example of the regime to protect the Mediterranean Sea, Haas claimed that a cognitivist approach allowed the theorist to demonstrate that "new regime patterns may result from new information and as a consequence of self-reflection by various actors."[71] In questioning the concept of fixed interests, cognitivists do not restrict themselves to questions of regime formation, maintenance and decline and towards the processes which occur during the life of the regime. Kratochwil and Ruggie declared, for instance, that:

> the idea that [Krasner's] four regime components should also be coherent, and that coherence indicates regime strength, is even more profoundly problematical. The basic epistemological problem with this notion is its presumption that, once machinery is in place, actors merely remain programmed by it. But this is clearly not so. Actors not only reproduce normative structures, they also change them by their very practice, as underlying conditions change.[72]

There is thus a self-conscious determination among cognitivists to "adopt an ontology that embraces historical, interpretive factors as well as structural forces, explaining change in a dynamic way."[73]

Consequently, the relationship between change and learning pervades this school of regime theory. This is hardly surprising, given that an emphasis on the role

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[69] This was also observed by Christer Jönsson, who noted that "Haas emphasizes the role of knowledge-based communities in the creation of regimes rather than the maintenance of regime." (See Jönsson, "Cognitive Factors in Regime Dynamics," in Rittberger et al., *Regime Theory and International Relations*, p.215.)

[70] Raymond F. Hopkins, "Reform in the international food regime: the role of consensual knowledge," *International Organization,* vol.46, no.1, Winter 1992 p.264.

[71] Peter M. Haas, "Epistemic Communities and the Dynamics of International Environmental Cooperation," in Rittberger et.al., *Regime Theory and International Relations,* p.170.

[72] Kratochwil and Ruggie, "International Organization: A State of the Art on the Art of the State," p.770.

of new knowledge as leading to the formation and change to a regime is meaningless without that knowledge being adopted and acted upon (learnt from). This link between learning and regime change was cited as an essential component of the cognitivist approach when it was observed that "regimes are not simply static summaries of rules and norms; they may also serve as important vehicles for international learning that produce convergent state policies."[74] As one survey of this approach to regimes noted, "regime analysts who have proposed learning as a key variable accounting for regime change understand the concept in terms of cognitive change in response to new information."[75]

Learning – alluded to in this context as "a critical process by which regime patterns change over time"[76] – was generally subdivided into two types which, regardless of how the author labelled them, differentiated simple adaptation by a regime to new knowledge from 'real' learning as a result of that new knowledge. In 1987, ten years after his first expression of concern with how and why regimes change, Nye categorised these differences as "simple" and "complex" learning.[77] Simple learning, he declared, involved changes to the means, without altering any deeper goals, while complex learning, "involves recognition of conflicts among

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[73] Haas and Adler, "Conclusion: epistemic communities, world order, and the creation of a reflective research program," p.370

[74] Peter M. Haas, "Do Regimes Matter? Epistemic Communities and Mediterranean pollution control," *International Organization,* vol.41, no.3, Summer 1989, p.377.

[75] Jönsson, "Cognitive Factor in Regime Dynamics," in Rittberger et.al., *Theories of International Regimes,* p.217.

[76] Peter M. Haas, "Epistemic Communities and Dynamics of International Environmental Cooperation," in Rittberger et.al, *Theories of International Regimes,* p.201.

[77] Joseph S. Nye, Jr., "Nuclear learning and US-Soviet security regimes," *International Organization,* vol.41, no.3, Summer 1987, p.380. Nye adopted his distinction from that made by Argyris and Schon, who identified single loop versus double loop learning. (See Chris Argyris and Donald Schon, *Organization Learning: A Theory of Action Perspective,* (Reading, Mass.: Addison-Wesley; 1978).

means and goals...and leads to new priorities and trade-offs."[78] Similarly, Emanual Adler and Peter Haas's evaluation of regimes contained the observation that learning could be "the adaptation of new instrumental ends (new practices) and the adoption of new principled ends (new goals)."[79] Ernst Haas, too, made the distinction between adaptation (a change of procedures) and true learning (a change of principles or underlying values)[80].

What is both interesting and important about such distinctions is their correspondence to Krasner's conception of regime change. As was noted earlier, Krasner differentiated between 'genuine' regime change (a change in the norms and principles of the regime which would be reflected in concurrent change to the rules and decision-making procedures) and change within the regime (change which is limited to the rules and decision-making procedures). This distinction is one which drew the attention of, and been underscored by, cognitivist regime theorists and demonstrates once again a concern with the question of regime change that was almost entirely lacking in mainstream regime theory.

More recently, the development of international regimes was studied with regard to the quesiton of regime robustness. In a 1994 article, Frank Schimmelfennig engaged with the question of change by attempting to measure this robustness, as he defined it: "the (more or less well-developed) disposition of international regimes to survive, ensure rule-compliant behaviour of the participating states, and attain the regime goals even in the case of major shocks."[81] Not only does such a study broach

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[78] Nye, Jr., "Nuclear learning and US-Soviet security regimes," p.380.

[79] Adler and Haas, "Conclusion: epistemic communities, world order, and the creation of a reflective approach program," p.386.

[80] Ernst Haas, *When Knowledge is Power: Three Models of Change in International Organizations,* (Berkeley, California: University of California Press; 1990), p.3

the question of shocks, but it engages with the possibility that change, or at least adaptation to external events, is an ingrained capability of a successful regime. In practice, however, Schimmelfennig was concerned simply to measure the health of a regime by its reaction to a shock and its ability to maintain compliance. The presence or absence of this ability was considered to reflect the strength or weakness of the regime, in this case, selected arms control regimes (including the nonproliferation regime).

Schimmelfennig's conclusion that the nonproliferation regime reaction to the dissolution of the Soviet Union indicated regime weakness[82] was criticised, as was his tendency to conflate regime attractiveness with regime strength.[83] The exploration of regime robustness was intended by the author to "put the main emphasis on the observable process of regime evolution and the motivations of the actors conveyed by them."[84] Indeed, and in common with cognitivist approaches, the subject of regime robustness has an inbuilt sensitivity to the question of regime change and adaptation to shocks. In practice, however, Schimmelfennig's intentions were similar to those of the realist. The article was, by his own admission, concerned to use regime robustness "with regard to different aspects of the question 'Do regimes matter (for peace)?'[85]" rather than how, why and more importantly *whether* a regime adapts in the face of one.

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[81] Frank Schimmelfennig, "Arms Control Regimes and the Dissolution of the Soviet Union. Realism, Institutionalism and Regime Robustness" in *Cooperation and Conflict,* vol.29, no.2, June 1994, p.117-18.

[82] Schimmelfennig, "Arms Control Regimes and the Dissolution of the Soviet Union", p.126. (The author writes that the reaction to the collapse of the USSR "has so far been slow and hesitant. This in itself is hardly an indication of regime strength.")

[83] Harald Müller, "Regime Robustness, Regime Attractivity and Arms Control Regimes in Europe", in *Cooperation and Conflict,* vol.30, no.3, September 1995, pp.287-297.

[84] Frank Schimmelfennig, "New States, Old Regimes, Short Time: A Rejoinder", in *Cooperation and Conflict,* vol.30, no.3, September 1995, p.302.

Cognitivist regime theory, while continuing to focus on the apparently all important question of regime formation,[86] therefore exhibits a clear sympathy for the existence of, and importance of, regime development and change after its establishment and before its demise. Cognitivists, even those who seek primarily to complement mainstream theories of regimes, seek to achieve a fresh balance betwen structure and process. However, despite the importance granted to the question of change and regimes, most cognitivist approaches exhibit a limited understanding of the manner of that change. While sensitive to the existence of change to the regime following its formation, this approach is infused with underlying assumptions that change is gradual and incremental. While rejecting the notion that regimes are fixed once established, they argue in favour of a continuous evolution.

Peter M. Haas entrenched these gradualist assumptions when he expressed his concern that cognitivist regime theory redress the ignorance regarding "broader patterns of regime change over time." With specific reference to the Mediterranean Sea protection regime, Haas wrote of the need to "explain the regime's evolutionary pattern."[87] This imagery manifested again in Adler and Haas's discussion of epistemic communities in which "the most fruitful metaphor for thinking about epistemic communities is that of evolution."[88]

More pointed still are those cognitivists who actively refute the possibility of a non-incremental pattern of regime development. Hopkins, as noted earlier, claimed

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[85] Schimmelfennig, "Arms Control Regimes and the Dissolution of the Soviet Union", p.145.

[86] As Gerd Junne notes, cognitive theories of regime tend to "see a convergence of interests (as a result of common knowledge ideology, or increasing transnational contacts) as the major source of regime formation." (See Junne, " Beyond regime theory," p.15).

[87] Peter M. Haas, "Epistemic Communities and the Dynamics of International Environmental Cooperation," p.200 and p.169 respectively.

[88] Adler and Haas, "Conclusion: epistemic communities, world order, and the creation of a reflective research program," p.372.

that "incremental change can occur when consensual views of an epistemic community diverge from the politically modal position of the supporters of a policy."[89] Immediately after that declaration, Hopkins asserted that "synoptic change, however, is not plausible."[90] Thomas Gehring, in his discussion of environmental regimes, was still more opposed to the possibility of non-incremental change when he stated that "careful case studies did not support the hypothesis of institutional stability followed by sudden change, but revealed a gradual, continuing development of regimes."[91]

Although, broadly speaking, cognitivist approaches to regime analysis reveal a concern with the question of regime development, when the manner of that development is *explicitly* discussed, there appears to be an assumption of incremental change.[92] It is not the contention of this investigation to deny the existence of this type of gradual, evolutionary regime development. Rather, in answering the question of how the nuclear nonproliferation regime has developed, it will be demonstrated that this gradualist evolutionary model is often inappropriate.

Some Conclusions Regarding Regime Theory and Change:

This overview of the place of regime change in regime theory allows some interesting conclusions to be drawn. It is apparent that indications of non-incremental regime change in response to shocks poses a problem for the accepted understanding

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[89] Hopkins, "Reform in the international food regime," p.264.

[90] Ibid., p.264. The author went on to state that "turbulent condition, as in the 1973-74 period can accelerate change, but when the larger world economic order is not dissolving, the dominant pattern is incremental change." (p.264).

[91] Gehring, *Dynamic International Regimes: Institutions for Environmental Governance,* p.29.

[92] Certainly, the possibility of a non-incremental pattern of regime development has been proposed, although not investigated in any detail. Christer Jönsson, for example, noted that "a pertinent question

of how and whether regimes change after their formation. It has become clear, for example, that mainstream regime theory of the sort which reflects realist and neoliberal assumptions tends not only to ignore the questions of regime change and development, but to exclude them by virtue not only of their overriding concern to explain regime formation, but of their assumption of fixed interests, around which (as Krasner claimed) actor expectations converge.

Cognitivist regime theory, on the other hand, has a sympathy for, and active engagement with, questions of regime change. In this, it differs markedly from approaches which have hitherto dominated the discussion. However, this acknowledgement of the existence and importance of regime change nonetheless assumes that such change tends to occur in a very specific fashion. Where the pattern of overall regime development is explicitly discussed, cognitivist regime theorists usually presuppose incremental, gradual change and, in some cases, actively to dismiss the possibility of any other kind of pattern. As a result, this branch of regime analysis has – in practice, if not in theory – provided insufficient understandings of how regimes change and develop.

An exploration of non-incremental regime development is, therefore, one which has been occasionally referred to and yet remained unexplored in regime theory. This investigation seeks to establish that this neglect is unjustified. The nuclear nonproliferation regime did not develop in a continuous, gradual way but rather in phases of rapid change which stood in contrast to periods of inactivity. This pattern of change is one which, as noted earlier, ultimately lends itself to a model through which the circumstances of such change may be understood. Although this does not mean that regimes never evolve gradually, it does mean that the assumptions

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for further research is whether international regimes tend to change together after periods of regime

regarding regime change which underlie regime theory require both reevaluation and supplementation.

persistence and stability." (See Jönsson, "Cognitive Factors in Regime Dynamics," p.220).

Chapter 2: The Indian Nuclear Test of 1974 – A Case of Regime Change?

The decision by the Indian government to conduct a nuclear test on May 18th, 1974, resulted in the first overt act of nuclear proliferation since the 1964 Chinese nuclear test. It was, moreover, the first act of proliferation since the codification of the nuclear nonproliferation regime (in the form of the NPT) six years earlier. The first four years of the decade had been uneventful insofar as nuclear proliferation was concerned. In the sense that no direct proliferation challenges had been posed, the regime appeared to be a success in spite of the fact that neither West Germany nor Japan had as yet ratified their signature of the Treaty.[1]

As a consequence, and in spite of India's non-participation in the NPT, the so-called 'peaceful' Indian test posed the first serious challenge to the new regime. It was later recalled by a member of the Carter Administration that by the early 1970's "there was a degree of complacency about the nonproliferation regime that had been constructed."[2] However, in the light of the Indian test, the fact that the establishment of the regime had not been followed by nuclear proliferation looks as much a coincidence as a credit to the regime. Having "shattered the smugness"[3], the 1974 Indian test stood as the first real shock to the regime instituted in the 1960's.[4] The nuclear explosion "painfully exposed the failure of the NPT to achieve universality"[5],

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[1] Some of these other states who had not ratified the NPT as of May 1974 were: Argentina, Brazil, Indonesia, the Netherlands, Portugal. Canada and Sweden, however, stood as two examples of states who had a nuclear capability who had nonetheless ratified the NPT as non-nuclear weapons states.

[2] Joseph Nye, "Sustaining Nonproliferation in the 1980's," *Survival* vol.23, no.3, May/June 1981, p.99.

[3] Ashok Kapur, *International Nuclear Proliferation: Multilateral Diplomacy and Regional Aspects,* (New York: Praeger Publishers; 1979), p.183.

[4] The notion of the test as such is echoed by several commentator who referred to it, variously, as "the most dramatic blow struck at the NPT" (Hedley Bull, "Rethinking Non-Proliferation," *International Affairs*, vol.51, no.2 April 1975, p.175) and "the first serious challenge to the Nonproliferation Treaty

thereby raising doubts regarding the direction, and indeed purpose, of the regime itself. The Indian test was subsequently credited with having "undermined international confidence in the effectiveness of international commitments."[6]

The purpose of the following discussion is to examine the years immediately prior to and following the shock in the hopes of drawing three conclusions. An analysis of the years immediately prior to the shock will help to clarify whether or not the shock did indeed occur following a period of inactivity in the regime. Secondly, and more importantly, an analysis of post-shock events will indicate whether or not the Indian test was indeed followed by a development of the regime in the form of what has been accepted to be 'genuine' regime change: change to the norms and principles of the regime, as well as to its rules and decision-making procedures. This will be accomplished by examining the immediate international reactions to the event itself and then by examining the years following those reactions and the regime change that occurred, or failed to occur, during this time. It will then be possible to begin to answer the first question posed in the introduction: whether or not a pattern of regime development may be detected in which – in contrast to that assumed by regime theory – regime inactivity is punctuated by a shock and followed by rapid and genuine regime change. Moreover, the historical narrative of the events following the shock provides a necessary basis for any subsequent attempt to understand the circumstances under which the shock resulted in, or failed to result in, regime change – the discussion of which will be the focus of the next chapter.

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system" (James E. Dougherty, "Nuclear Proliferation in Asia," *Orbis*, vol.19, no.3, Fall 1975, p.925). David Fischer, formerly of the International Atomic Energy Agency (IAEA), referred to the test explicitly as "the first shock to the newly-created 'nuclear non-proliferation regime'." (David Fischer, *History of the IAEA*, p.96).

[5] Harald Müller, David Fischer and Wolfgang Kötter, *Nuclear Non-Proliferation and Global Order*, (Oxford: Oxford University Press; 1994), p.22.

[6] David Fischer, in interview via e-mail, July 18, 2000.

The Regime and Nuclear Context Prior to the Test:

As noted in the introductory chapter, the establishment of a formal nuclear nonproliferation regime, with the Nuclear Non-Proliferation Treaty of 1968 at its centre, had cemented the legality of nuclear weapons possession by a few countries (the Permanent five members of the UN Security Council, as it happened) and looked forward to their renunciation by the rest. Such an explicit stratification of the international order offended the sensibilities of some, particularly post-colonial states such as India. Not surprisingly, then, this inequity within the regime was highlighted following the Indian test although not exclusively by post-colonial countries. Moreover, although India had refused to join the NPT, the testing of a nuclear device – even one which claimed to be 'peaceful' – nonetheless challenged the norm against nuclear proliferation which the regime had attempted to establish.

The four years which preceded the Indian test and followed the NPT's official entry into force had seen a solidification of NPT safeguards (INFCIRC/153, developed between 1968 and 1971) and efforts to expand the number of participants to the regime. In spite of the existence of a new regime, the years between 1970 and 1974 have nonetheless been identified as part of a broader 'period of consensus',[7] which had its origins with the policies first proposed in the 1953 Atoms for Peace plan put forward by American President Eisenhower. The right of a state to access the benefits of nuclear power for peaceful purposes, a central tenet of the Atoms for Peace plan, was subsequently enshrined in the NPT, which affirmed that

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[7] Bertrand Goldschmidt and Myron B. Kratzer, *Peaceful Nuclear Relations: A Study of the Creation and Erosion of Confidence,* (New York: Rockefeller Foundation/Royal Institute of International Affairs; 1978), quoted in M.J. Wilmhurst, "The Development of Current Non-Proliferation Policies," in John Simpson and Anthony G. McGrew (eds.), *The International Nuclear Non-Proliferation System: Challenges and Choices,* (London: The Macmillan Press, Ltd.; 1984), p.23.

> all Parties to the Treaty are entitles to participate in the fullest possible exchange of scientific information for, and to contribute alone or in co-operation with other States to, the further development of the applications of atomic energy for peaceful purposes.[8]

In spite of the stratification inherent in the new nonproliferation regime, such sentiments did not upset the broad assumptions of peaceful nuclear technology which had prevailed thus far, nor the assumptions that future proliferation was likely to occur in highly industrialised states. The so-called period of consensus which had formed prior to the codification of the regime continued after its creation and until the Indian test challenged those assumptions. The years immediately prior to the test, however, are palpably free of any substantial change to the regime other than a numerical expansion of participants and the debates over ratification that accompanied it within countries such as Japan and West Germany. Certainly, no changes to the structure of the regime had taken place since the establishment of INFCIRC/153 in 1971: no new components had arisen, no new rules or decision-making procedures. As a consequence, the norms and principles of the regime remained correspondingly unaltered. Whatever the reasons, the years which preceded the Indian test did indeed appear to reflect stability in the regime, both structurally and normatively.

This is not to say that the nuclear context in which the regime existed had remained unchanging. Although the nonproliferation regime had undergone no significant alteration in the four years previous to the Indian test, the nuclear context in which it existed had changed in other respects. Most significantly, between 1973 and 1974, there was an oil embargo and the seizure by Arab states of control over the

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[8] *Treaty on the Non-Proliferation of Nuclear Weapons* (Non-Proliferation Treaty, NPT), Preamble.

reserves. This embargo, following on the heels of the Arab-Israeli War of 1973, resulted in a four-fold increase in oil prices which, among other things, had a direct impact upon expectations of the future role of nuclear energy which differed from those which had existed at the time of the formal institutionalisation of the regime in the NPT. The celebrated power of the atom was increasingly viewed as the way of the future, and the only means by which any oil-deficient state was to survive the expected energy crises. Nuclear power was, in fact, believed to be nothing less than "the only really viable and relevant alternative source of energy."[9] Such a possibility, of course, posed problems of its own. Specifically, it began to hint at increased likelihood of nuclear proliferation by "[raising] questions about whether there would be sufficient uranium to fuel all the reactors that suddenly appeared on the market."[10] The plutonium created as a consequence of the uranium reprocessing appeared as the most obvious and most viable alternative fuel in the instance of a uranium shortage.

The oil crisis and the period that followed it served to highlight the decline of the American dominance of the nuclear industry which had prevailed since the end of the Second World War. This aspect of US nuclear hegemony had been slowly dissipating as other countries such as Canada, France and West Germany moved "on to the offensive in civil nuclear markets"[11] and proved themselves increasingly able to sell facilities capable of being used to produce weapons-usable material. Despite these new developments, the norms, principles, rules and decision-making procedures – as codified in the NPT six years earlier – remained unaltered.

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[9] Karl Kaiser, "Nuclear Energy and Nonproliferation in the 1980's," Arbeitspapiere zur Internationalen Politik 12: *Nuclear Policy in Europe: France, Germany and the International Debate,* March 1980, p.20.

[10] Joseph Nye, "Maintaining a Nonproliferation Regime," in George H. Quester (ed.) *Nuclear Proliferation: Breaking the Chain,* (London: The University of Wisconsin Press Ltd.; 1981), p.20.

[11] William Walker and Måns Lönnroth, *Nuclear Power Struggles: Industrial Competition and Proliferation Control,* (London: George Allen & Unwin Ltd.; 1983), p.29.

The Shock:

The Indian test in May of 1974 therefore occurred amidst a background of worries about energy supplies and changing expectations as to the likelihood and manner of future nuclear proliferation. It stood as a challenge to a nonproliferation regime which had been settled since its inception. Although the Indian capability to conduct such a test had often been recognized,[12] the test confirmed the new expectations of the future manner of proliferation and yet simultaneously ran counter to the trend which included an increasing number of NPT signatories and gradual entrenchment of the regime's norms. For the first time in ten years, a nuclear explosive device had been tested by a new state. This new state, however, was not one of the industrialized states who were originally envisioned as being the most likely proliferators of the immediate future. Rather, it was one of the so-called less developed countries which had successfully carried out such an event. The fact that the country in question stubbornly insisted that its explosion had been 'peaceful' did little to alter the fact that nuclear proliferation had occurred. The use of a plutonium-based device by India, furthermore, hinted forebodingly at the problem of the increased availability of plutonium. While proliferation expectations had changed, the regime remained as it was – a reflection of expectations which existed before the fear of widespread access to plutonium had been raised.

[12] One State Department official, for example, was quoted as observing that an Indian test was a matter of "when" rather than "if" (official cited by George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation,* (Berkeley and Los Angeles, California: University of California Press; 1999), p.183). In the United Kingdom, *The Daily Telegraph* had reported a year earlier that India "had decided to start work on the development of atomic explosives and could set off her atomic bomb in less than two years" (27 July 1971).

Initial International Reactions:

Immediately following the successful test, India set about implementing damage control in anticipation of criticism from outside the country. Obviously, countries such as Pakistan and China were far from delighted that the Indians were both willing and able to carry out the test. In Pakistan, Prime Minister Zulfikar Ali Bhutto and others muttered ominously about the need for Pakistan to be free of nuclear blackmail and to reassess its intentions.[13] The Chinese, although certainly displeased that the test had taken place, reacted in a manner which one author described as "conscious aloofness, reporting the event without comment."[14] However, those in India's immediate neighbourhood were not the only source of discontent. Despite Indian Prime Minister Gandhi's assertion that the explosion was "nothing to get excited about"[15] the first act of nuclear proliferation in a decade – peaceful or no – was simply not going to pass unacknowledged.

It would be a Sisyphean task to detail the reactions of every state to the Indian test. A useful discussion of the consequence of the shock in the context of the regime may be equally well-served by examining the reactions of certain actors: key regime participants (such as the United States, the USSR and, to a lesser extent the United Kingdom) and the relevant nuclear suppliers (France, West Germany and, in this case, Canada).[16] Not surprisingly, these states were the major players in determining the

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[13] Prime Minister Bhutto was quoted as stating that Pakistan was "determined not to succumb to "nuclear blackmail" (*New York Times,* 20 May 1974). A Foreign Ministry statement was reported as having rejected the Indian distinction between a peaceful and military nuclear explosion (*New York Times,* 19 May 1974).

[14] Perkovich, *India's Nuclear Bomb,* p.187. It was observed, in 1996, that "one can only conclude that China has not felt much threatened by India's nuclear weapon program." (See William Walker, "India's Nuclear Labyrinth," *The Non-Proliferation Review,* vol.4, no.1, Fall 1996, p.63.)

[15] Quoted in *The New York Times,* 19 May 1974.

outcome of the shock. Given that the test was the first by a new state in ten years, the international reaction, with one exception, was surprisingly understated, at least in the months immediately following the test and was subsequently described as being "conspicuous by its silence."[17]

Canada

The one exception to an otherwise subdued international reaction to the Indian test was Canada. It had been a Canadian-supplied CIRUS research reactor (provided on the condition of use for peaceful purposes only) which had been used by the Indians as the source for plutonium. Consequently, the Indian test stood as "the first...nuclear test that had used fissile material produced by a reactor designed and supplied for use only in 'peaceful' research."[18]

Consequently, and despite continuing Indian protestations that the explosion had been 'peaceful' and therefore in keeping with the terms of supply, the Canadian reaction was one of vocal anger and embarrassment. Canada's Representative to the UN Conference of the Committee on Disarmament stated that the Canadian Government was "very disturbed" by the explosion and that "Canada has made it clear that it sees no difference between the development of nuclear explosives intended for peaceful purposes and the development of nuclear explosives for military purposes."[19] Addressing the same body a day later, the Canadian Secretary of State

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[16] The International Atomic Energy Agency (IAEA), although obviously a crucial part of the regime, lies outside the discussion in this case, having not been responsible for safeguarding the reactor in question and thus not being directly affected by the shock nor involved in its outcome.

[17] Robert L. Beckman, *Nuclear Non-Proliferation: Congress and the Control of Peaceful Nuclear Activities,* (Boulder and London: Westview Press, Inc.; 1985), p.217.

[18] Fischer, *History of the IAEA,* p.97.

[19] "Statement by the Canadian Representative (Barton) to the Conference of the Committee on Disarmament: Indian Nuclear Explosion," May 21st, 1974 in Reprinted in United States Arms Control

for External Affairs stated that his government was "very distressed and concerned that this latest member of the nuclear club should be a country with which successive Canadian governments have carried on...extensive co-operation."[20] He went on to accuse the Indians of having conducted a test which "undermines the position which Canada has for a long time been firmly convinced is best for world peace and security."[21] Indian protestations that a peaceful explosion did not contravene Canadian supply conditions did little to mollify such sentiments. An editorial in the *Ottawa Citizen*, for example, demanded that Canada cut off all nuclear aid to India, claiming that "Prime Minister Gandhi has known Canada's position for years. It is unequivocally against nuclear explosion – underground, above ground, on the ground."[22]

Canada moved immediately following the explosion to cancel all existing supply arrangement with India. On May 22nd, assistance was frozen subject to Indian acceptance of IAEA safeguards on all of its reactors.[23] The reaction, in other words, was both vociferous and swift. Canadian concern at the way India had – in its view – distorted the terms of supply, clearly caused discomfiture at the role Canada had therefore played in aiding this latest act of nuclear proliferation. Perhaps as a consequence, this initial reaction differed markedly from those elsewhere in the world (with the obvious exception of Pakistan).

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and Disarmament Agency (ACDA), *Documents on Disarmament 1974* (Washington, D.C.: USACDA; 1974), p.151.

[20] Canadian External Affairs Secretary Sharp, "Address to the Conference of the Committee on Disarmament," 22 May 1974, in *Documents on Disarment, 1974,* p.153.

[21] Ibid., p.153.

[22] *The Ottawa Citizen,* 22 May 1974.

[23] Leonard Spector, *Nuclear Proliferation Today,* (New York: Vintage Books; 1984), pp.38-39.

The Soviet Union

In harmony with the majority of other international reactions, the Soviet reaction to the Indian test was muted. The Tass News Agency was reported in an American newspaper as having observed merely that India was simply "striving to keep at the level of world technology in the peaceful uses of nuclear explosions."[24] The USSR's care and strictness within its own borders regarding the spread of nuclear technology were ample evidence of its own concern with preventing proliferation. Its 1971 Treaty of Friendship and Cooperation with India discouraged a strong expression of concern. Moreover, it "accepted at its face value the Indian assertion that it was a 'peaceful' [explosion]."[25] Its reaction, as a consequence, was accurately described as being fundamentally "non-committal" by one commentator.[26]

Nonetheless, and given its own history and its position as an NPT signatory, the subdued Soviet reaction was by no means evidence of an endorsement of the Indian test. Past Soviet commitments to nuclear nonproliferation, and events which were to come, seem to indicate, rather, that the Soviet Union was "privately displeased"[27] with the Indian decision, in spite of the two states' official friendship.[28]

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[24] Quoted in *The Washington Post*, 19 May 1974.

[25] Roland Timerbaev (at the time Deputy Director of International Organizations in the Soviet Ministry of Foreign Affairs). From an interview conducted via e-mail, 17 December 1999.

[26] Lt. Col. Naeem Ahmed Salik, *Nuclear Politics of India and Pakistan,* (Islamabad: Institute of Strategic Studies Islamabad; 1992), p.13.

[27] Perkovich, *India's Nuclear Bomb,* p.187.

[28] Dougherty, in his article "Nuclear Proliferation in Asia," stated that Soviet pique was simply a charade and "designed to disguise the fact that the Soviet Union had been kept fully informed of the

The United Kingdom

In keeping with the generally muted reaction internationally, the breast-beating which had characterised the Canadian response was absent in the United Kingdom. In a statement to the UN Committee on Disarmament, for example, it was declared by the UK representative that "my government shares the concern which other have expressed over this event."[29] It was further observed – rather self-evidently – that the Indian test "has created a new situation."[30] The question of what do in response remained, in keeping with the reaction of the majority of other states, unanswered.

France and West Germany

The reaction to the Indian test by the two most commercially-minded nuclear suppliers did not reflect any outrage at the event. In France, the timing of the Indian test coincided with the election of the new President, Valery Giscard d'Estaing. In spite of such distractions, the chairman of the French Atomic Energy Commission was still able to send a congratulatory telegram to his Indian counterpart. This was in keeping with the French commitment to the right of a state to develop or import the necessary (and presumably French) products in order to receive the benefits of nuclear energy. France, a non-participant in the NPT, also held the view that all states –its neighbours apart – possessed a sovereign right to acquire and test nuclear weapons.

West Germany, another rising star in the nuclear industry, also strongly supported the right of access to peaceful nuclear technology as defined under the NPT

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decision and had rendered advice and assistance" (p.952). There seems, however, to be little evidence of this.

[29] Statement by the British Representative (Hainworth) to the Conference of the Committee on Disarmament, 23 May 1974, reprinted in *Documents on Disarmament 1974*, p.155.

(which included peaceful nuclear explosions).[31] In the words of one observer – at the time a member of the Ministry of Research and Technology – "nuclear power will not only be beneficial to industrialized nations, but will also be important for the economic development and welfare of other countries in the world."[32] The belief was also expressed that "on the basis of NPT terms, countries with a highly developed nuclear technology should continue to cooperate with recipient countries."[33]

The United States

As one of the architects and depositories of the NPT (with the USSR and UK), it may have been expected that the United States should react strongly and vocally against the Indian test. Instead, the initial American reaction was somewhat muted. Given that the Nixon Administration was occupied with the Watergate scandal, this was perhaps understandable. A State Department comment on the subject blandly observed that "the United States has always been against nuclear proliferation for the adverse impact it will have on world stability."[34] No mention was made of what the United States intended to do in response to the event. Rather, the mildness of the reaction supported the notion that the test had provoked among the State Department and Administration, "neither profound concern nor sharp displeasure."[35]

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[30] Ibid., p.155.

[31] In this commitment to the right to acquire peaceful nuclear power, the West German position was like that of France's. The French belief in the right to develop nuclear power for military purposes, however, was not shared by West Germany.

[32] Wolf-J. Schmidt-Küster, "German Nuclear Energy Development and International Cooperation", in Joseph F. Pilat, Robert E. Pendley, and Charles K. Ebinger, *Atoms for Peace: An Analysis After Thirty Years,* (Boulder and London: Westview Press; 1985), p.108.

[33] Ibid., p.108.

[34] *New York Times,* 19 May 1974.

[35] Michael J. Brenner, *Nuclear Power and Non-Proliferation: The Remaking of US Policy,* (Cambridge: Cambridge University Press; 1981), p.68.

However, the official nonchalance of the American reaction to the Indian test did not appear to extend throughout government. Barely two months after the test, the first Congressional hearings were held in an attempt to answer the questions India was seen to have raised.[36] In sharp contrast to the ambivalent reaction at the executive level, these first Senate hearings evidenced a distinct unease with the Indian test. Fears were expressed over the precedent that India had set and the ways in which similar events were to prevented.[37] The Indian test had communicated to the Senate an impression of – as one Senator put it – "what can happen to what was, indeed, a very fine concept:....the peaceful uses of atomic energy."[38] Consequently, another participant in this initial hearing even went so far as to contribute an article to *Foreign Affairs*, calling for the United States to lead the quest for changes which the Indian test had shown to be necessary.[39]

From the outset, then, the apparent diffidence of the American Administration's reaction to the Indian test was belied by nervous mutterings in Congress. A growing division, albeit one which was emerged only gradually in the few months following the test, was nonetheless evident. This disagreement would eventually prove crucial to the outcome of the shock as a whole. The immediate aftermath of the Indian test, however, merely demonstrated that the half-hearted reaction of the American Administration was not, by any means, shared throughout all

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[36] *Exports of Nuclear Materials and Technology*, Hearings before the Subcommittee on International Finance of the Committee on Banking, Housing and Urban Affair, United States, Congress, Senate, Ninety-third Congress, second session (On Export Policy, Control, and Credits with particular to exports of nuclear technology and nuclear materials), July 12 and 15, 1974.

[37] Ibid., see especially, though not exclusively, pp.1, 2, and 24.

[38] *Exports of Nuclear Materials and Technology*, p.26. (Speaker: Senator Jackson.)

[39] Adlai E. Stevenson III, "Nuclear Reactors: American Must Act," *Foreign Affairs*, vol.53, no.1 1974.

levels of government and that a gulf was forming between Congress and the Administration.

The Outcome of the Shock:

In spite of the initial hesitation that characterized international reactions to the Indian test, the three years which followed it saw a substantial elaboration of the nonproliferation regime in the form of a new institution and corresponding international agreement of the conditions of nuclear exports. This agreement, entered into by the nuclear supplier states, was the Nuclear Suppliers Guidelines (NSG) which provided standards for nuclear exports by the member states. The path from the Indian test to the creation of this new part of the regime had its origins in the division which had opened between Congress and the Administration in the couple of months which followed the Indian test.

Canadian antipathy to the Indian test notwithstanding, real internationalisation of the problems raised by India was a consequence of a gradual consensus within the American government that such action was necessary. This consensus appears to have been rooted in what one commentator has described as "one of the most significant recent assertion of Congressional over U.S. Foreign Policy."[40] As a consequence of proliferation becoming a central concern of Congress, the Administration found it difficult to avoid taking an international lead to solve the problems and close the loopholes brought to light in May 1974.

The first example of this Congressional consciousness-raising occurred barely two months after the Indian test and in the face of apparent official unconcern. In these July 1974 hearings, growing disquiet was expressed not only with the possibility

of imitators of India's strategy, but with the state of American nuclear export policy and the ways in which it could contribute to further acts of proliferation. A rising belief that "the standards that we have applied are apparently not adequate"[41] pervaded the tone of these first hearings and (combined with questions about American nuclear policy questions that were asked of the Atomic Energy Commission (AEC) representative)[42] stood as the beginnings of Congressional pressure on the Administration to change and internationalise standards for nuclear exports. Despite the inactivity which prevailed elsewhere, the Indian test evoked a belief in Congress in the necessity of "trying to legislate and see if we can avoid some more Indias."[43] In this venture, it was frequently supported by newspaper editorials calling for action to be taken.[44] In the immediate aftermath of the shock, it was noted by U.S. News and World Report that "much editorial comment in U.S. newspapers ran against India."[45]

These calls for change were beginning to make themselves heard at the Administrative level in the months following the accession of Gerald Ford as President. This came after a five month gap in which no concrete activity was undertaken to deal with the consequences of the Indian test. Although the test had been followed by a June meeting of the Zangger Committee (a group of NPT suppliers who met on an informal basis to discuss export control), this meeting had

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[40] Frederick Williams, "The United States and Nonproliferation," *International Security*, vol.3, no.2 Fall 1978, p.45.

[41] *Exports of Nuclear Materials and Technology*, p.24 (speaker: Senator Jackson).

[42] Ibid., p.40.

[43] Ibid., p.24.

[44] See, for example, the editorial in *The Washington Post* in which was declared that "for India to call its explosion 'peaceful' and to abjure all military intent is, in a word, rubbish." (21 May 1974).

been scheduled prior to the shock. It did not, therefore, stand as an independent, pro-active attempt to deal with the questions the Indian test had raised. Moreover, no actions to change the measures which had thus far failed to prevent Indian proliferation were decided upon.

By the fall of 1974, however, the fretting in Congress had "created irresistible pressure to rewrite the rules governing nuclear exports"[46] and was manifesting in the outlook of the new Ford Administration. The Secretary of State, Henry Kissinger, asserted in a statement before the United Nations General Assembly, that the advantages of nuclear explosive technology "will prove to be ephemeral" and that "when Pandora's box has been opened, no country will be the beneficiary."[47] Nonetheless, no decisive action had been taken by the Administration in the first five months following the test to deal with a situation that, it was now acknowledged, was undoubtedly problematic for international attempts to prevent nuclear proliferation.

This time, the determination within Congress that "we just cannot tolerate a further lack of attention on (sic) a problem of this magnitude"[48] was accompanied by evidence of an impetus on the part of the Ford Administration to make up for lost time. Between October and December of 1974, the first internationalisation of the search for a solution occurred when the US and USSR "agreed in Moscow...to establish a Nuclear Suppliers' Group of governments that were, or were expected to

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[45] "Fresh Fears of a 'Minor League' A-Bomb Race," 3 June 1974, in U.S. News and World Report, vol.76, April-June 1974, p.46.

[46] Brenner, *Nuclear Power and Non-Proliferation,* p.71.

[47] "An Age of Interdependence: Common Disaster or Community", Address by Secretary of State Kissinger to the 29th U.N. General Assembly [Extracts], September 23rd, 1974," reprinted in *Documents on Disarmament 1974*, p.511.

[48] Senator Brock, quoted in "Nuclear Fuel Control Urged by Hill Group," in *The Washington Post,* 10 November 1975.

become, exporters of nuclear materials or equipment."[49] In spite of their cautious reaction, the discussions – and general harmony of interests – between the United States and Soviet Union were indicative of the fact, as one participant recalled, that the USSR was no happier than the US at "the activities of Western developed economies trying to conquer nuclear equipment and technology markets to the detriment of nonproliferation."[50] Having been (with the exception of the experience with China) successful at preventing the proliferation of its own technology, there was little Soviet enthusiasm for such efforts being negated by proliferation elsewhere. Consequently, consultations between the United States and the USSR were held at which, in the recollection of one participant, it was decided to proceed with Kissinger's suggestion of "the establishment of a body comprising all major nuclear exporters, including France, to elaborate joint measures to avoid gaps in the system of nuclear nonproliferation."[51] A few months later, in February 1975, consultations with the United Kingdom also took place during which the convening of a group of suppliers in London was agreed.

This movement from expressions of concern to action came about following continuing distress in Congress immediately after the test and growing concern in the Administration. Following the 1975 announcements that France and West Germany had signed deals with Pakistan and Brazil respectively, such concerns appeared validated. These deals, which would see a reprocessing plant go to Pakistan and provide the Brazilians with a complete fuel cycle, alarmed Congress still further and prompted a series of hearings on the subject between March 1975 and November

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[49] Fischer, *History of the IAEA*, p.98.

[50] Roland Timerbaev, *The Nuclear Suppliers Group: Why and How it Was Created (1974-1978)* PIR Library Series. Moscow: Center for Policy Studies in Russia, October 2000., p.23.

[51] Timerbaev, *The Nuclear Suppliers Group*, p.28.

1976.[52] Nuclear nonproliferation had gone from existing only in "the shadowed recesses of U.S. foreign policy machinery"[53] to something approaching importance in the Administration and an unquestionable priority to Congress. Following the five month international delay after the Indian test things were, at last, beginning to move and multilateral solutions being proposed.

The series of Congressional hearings in 1975 and 1976 left little opportunity for the Administration to demote nuclear nonproliferation even had it wished to. In the opening statement of these hearings, it was asserted balefully that "the recent Indian nuclear explosion demonstrated dramatically that a country can develop nuclear explosives without any economy-breaking national drive."[54] The first NPT Review Conference in May 1975 had reaffirmed, in its final declaration, the potential benefits of peaceful nuclear explosions which could be made available by nuclear-weapon states to non-nuclear, non-NPT states. Such a suggestion, however, was linked with a concern that such "access to potential benefits of nuclear explosions for peaceful purposes not lead to any proliferation of nuclear explosive capability."[55] Nonetheless, the demands for action by the Administration to counter this threat and ensure that others did the same continued apace.

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[52] *Nonproliferation Issues,* Hearings before the Subcommittee on Arms Control, International Organizations and Security Agreements of the Committee on Foreign Relations, United States Senate, Ninety-fourth Congress, first and second sessions on nonproliferation issues, March 19, April 16 & 28, July 18 & 22, October 21 & 24, 1975; February 23 & 24, March 15, September 22, and November 8, 1976.

[53] Brenner, *Nuclear Power and Non-Proliferation,* p.83.

[54] *Nonproliferation Issues,* p.1 (Speaker: Senator Symington).

[55] "Final Declaration of Review Conference to the Treaty on the Non-Proliferation of Nuclear Weapons, May 1975," reprinted in *Non-Proliferation and International Safeguards,* (Vienna: IAEA; 1978), p.60.

The Internationalisation of the Indian test

This action, at the international level, began formally in April of 1975 with the first meeting in London of the nuclear suppliers. The commitment to participating in such a group was varied. The active participation of the US, USSR, UK, and Canada was in keeping with the concern over nuclear proliferation the Indian test had ultimately (or in the case of Canada, immediately) produced. France and West Germany were less enamoured of the whole enterprise than the others. Instead, and as one member of the French delegation later observed, the aim of multilateral export controls merely appeared to them to be an example of "the United States seeking to impose their plutonium-phobia upon the rest of the world."[56] In addition, such an agreement would, from the French point of view, bring about a new discrimination and contradict Article IV of the NPT – a treaty which France had not signed but had declared it would abide by.[57] Similarly, the West Germans were concerned that the implementation of export control should occur without "impairing [West Germany's] commercial viability, flexibility, and competitiveness."[58]

As a consequence, the negotiations which began in April of 1975 were far from smooth. Quite apart from their instinctive distaste for the goals of the proceedings, neither France or West Germany were willing to be persuaded to cancel their respective deals with Pakistan and Brazil. It was at a French request, moreover, that the meetings were held in secret, and it was this secrecy which "seemed to lend weight to the charge that the industrialized countries were creating a cartel to deny

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[56] Bertrand Goldschmidt, *Le Complexe Atomique,* p.475 (Goldschmidt writes: "alors que les États-Unis cherchaient à imposer au reste du monde leur phobie du plutonium.")

[57] Ibid., p.415 (Goldschmidt stated that these new proposals "va être la cause d'une nouvelle discrimination" and that they were "en contradiction formalle avec l'article IV de celui-ci.")

[58] Erwin Häckel "International Nuclear Commerce and Non-Proliferation: A West German View," in Rodney W. Jones, Cesare Merlini, Joseph F. Pilat and William C. Potter (eds.), *The Nuclear Suppliers and Nonproliferation: International Policy Choices,* (Lexington: Lexington Books; 1985), p.71.

advanced technology to the Third World."[59] As a consequence of these varying levels of enthusiasm, the negotiations of 1975 were not especially productive. The meetings, furthermore, were not to remain secret for long. By June it had been reported that nuclear suppliers were meeting "to draw up a convention that would pledge these countries – and, potentially, others who may become major exporters in the future – to place stringent controls on equipment and material sold to other nations."[60]

As the newspaper reports accurately noted, the intention was to achieve a commitment from the suppliers to exercise restraint in the transfer of sensitive technology. This necessitated agreement on what constituted sensitive technology and how much restraint was required in terms of the application of safeguards. The disagreements over such issues divided the French and West German delegations, who wanted no interference over their own export policies, from the others. These initial London meetings, then, manifested "two schools of thought on the possible means of reinforcing nonproliferation."[61] Moreover, the possibility of requiring that non-NPT states such as India and Brazil accept full-scope safeguards (those applied to NNWS parties to the NPT) did little to bring these two factions together, with France and West Germany wishing to retain the freedom to export to all countries.

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[59] David Fischer, *Towards 1995: The Prospects for Ending the Proliferation of Nuclear Weapons,* (Geneva: UNIDIR; 1993), p.100. It was observed that "from the outset, France insisted on avoiding any publicity about the Group and limiting to the bare minimum the number of other governments that could be kept informed of what was happening." (See Wilmhurst, "The Development of Current Non-Proliferation Policies," p.29.) While it has been suggested (for example, by Edward Wonder, "Nuclear Commerce and Nuclear Proliferation: Germany and Brazil, 1975," *Orbis,* vol.21, no.2, Summer 1977, p.303) that the Soviet Union also insisted on secrecy regarding the proceedings, this was recently denied by one of the Soviet delegation, Roland Timerbaev. (See Timerbaev, *The Nuclear Suppliers Group,* p.28, fn.45.)

[60] *The Washington Post,* 19 June 1975.

[61] Bertrand Goldschmidt, "A Historical Survey of Nonproliferation Policies," *International Security,* vol.2, no.1, p.79.

Nonetheless, the year 1976 saw the beginnings of a gradual consolidation among the participants. An initial version of the Guidelines had been passed, albeit without measures dealing with physical protection. The first two months of the year saw, respectively, the Soviet Union and the United States approve these preliminary Guidelines. Measures dealing with physical protection were adopted by the end of March.

More importantly, however, the French position was beginning to move from being, as one participant recalled, "quite passive"[62] to becoming gradually more involved in the discussions and, increasingly, more amenable to the possibility of a formal agreement. The continuing American pressure on France (and West Germany) to abandon their deals with Pakistan and Brazil had made little official progress. American efforts were portrayed as a simple unwillingness of the US government to compete with rivals such as France and West Germany.[63]

By the middle of 1976, however, there was evidence that the French position was beginning to change and become more favourable to the possibility of a supplier agreement. The newly elected French President, Valery Giscard d'Estaing was "more willing to pay attention to American concerns."[64] A newspaper article in May of that year observed that Giscard d'Estaing had declared that France would restrict sales of nuclear technology unless countries accepted agreed-upon controls. As the article

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[62] Timerbaev, *The Nuclear Suppliers Group,* p.36.

[63] *Le Monde,* 1 August 1976. (It was stated of the US that "le gouvernment ne veut pas être handicapé face à des concurrents étrangers particulièrement actif sur le marché expansion, comme les Français ou les Allemands.") West Germany too was identified as having been antagonised by US attempts to pressure for export controls. An editorial in *Die Zeit* (27 June 1975) was headlined: "Foreign Affairs – Are US Misgivings Just Sour Grapes?" (Translated and reprinted in "Nonproliferation Issues," p.125. An academic article underscored this perception, declaring that "those closest to the nuclear industry perceived nuclear energy as a conventional commercial undertaking, a matter of marks and pfennigs from which questions of a political nature should be excluded." (Wonder "Nuclear Commerce and Nuclear Proliferation," p.292).

accurately noted, "it was the most binding public pledge yet from his government."[65] The French President confirmed this more public nonproliferation commitment when he noted that while he believed France had to develop its own nuclear weapons, "we must be very careful not to increase the risk of nuclear danger to the world."[66]

Such sentiments, however, did not prevent what was referred to as a "spectacular public dispute"[67] between French Prime Minister Jacques Chirac and Secretary of State Kissinger over the Franco-Pakistani nuclear deal in August of 1976. This stood as the culmination of the dispute between the newly proliferation-aware Ford Administration and the "ambivalent and somewhat ambiguous posture"[68] characteristic of the Gaullist sympathies of Chirac.

This dispute did not, to American disappointment, directly result in a cancellation of the deal with Pakistan. It was followed, happily from the point of view of the American Administration, by the resignation of Chirac in the same month. In the remaining months of the year, France demonstrated conclusively that her position on nuclear exports was indeed "moving cautiously towards a more co-operative posture in the Suppliers' Club consultations and adopting a more restrictive export policy of her own."[69] In September, and although the deal with Pakistan ostensibly still remained, France announced an embargo on the future sale on nuclear fuel reprocessing plants. One month later – and two and a half years following the

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[64] David Fischer, *Stopping the Spread of Nuclear Weapons: The Past and Prospects,* (London and New York: Routledge; 1992), p.78.

[65] *The Washington Post,* 21 May 1976.

[66] "Interview of French President Giscard d'Estaing at the National Press Club: Nuclear Export Policy [Extract], May 20, 1976," reprinted in *Documents on Disarmament 1976*, (Washington, D.C.: ACDA; 1976), p. 323.

[67] Pierre Lellouche, "France in the International Nuclear Energy Controversy: A New Policy Under Giscard d'Estaing," *Orbis,* vol.22, no.4, Winter 1979, p.955.

[68] Ibid., p.955.

Indian test – France presented its official, six-point nuclear export policy which, while it continued to affirm French commitment to the peaceful application of nuclear energy, also stated the intention to "strengthen all relevant regulations and guarantees in the field of equipment, materials and technology."[70] Finally, in mid-December, it was announced that France would no longer make any bilateral deals for the transfer of reprocessing technology. In defending this apparent policy change against charges of having submitted to the wishes of the United States, the Minister of Foreign Affairs proclaimed that "over the past two years or so the world scientific community has realized that irradiated fuel reprocessing plants could lead to the bomb – notably after the Indian explosion in 1974."[71]

The reasons behind the French shift were various. The departure of Chirac has been credited with having "finally cleared the way for a clarification of French nuclear policy in the manner hoped for by the moderates within the French establishment and by Washington."[72] In addition, it has been asserted that the United States made France aware of the dubious intentions of Pakistan by supplying corroborating intelligence data.[73] Regardless of the reasons, the change in French policy made the institutionalisation of supplier standards much more feasible. This change also "left (W.) Germany alone in refusing to ban the future sale of sensitive

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[69] *Strategic Survey 1976* (London: International Institute of Strategic Studies; 1977), p.115.

[70] "Statement by the French High Council on Foreign Nuclear Policy: Nuclear Export Policy," October 11, 1976. (Released: French Embassy press release). Reprinted in *Documents on Disarmament 1976*, p.669.

[71] "Televised Interview of French Minister of Foreign Affairs de Guiringaud: Nuclear Export Policy, December 16, 1976," (French Embassy press release), reprinted in *Documents on Disarmament, 1976*, p.670.

[72] Lellouche, "France in the International Nuclear Controversy," p.959. The "tension" cited by Lellouche (p.957) between Chirac and Giscard as one of the factors blocking a declaration of nuclear export policy appears to be supported by the fact that the new policy was eventually made by the High Council on Foreign Nuclear Policy of France – a body established by President Giscard d'Estaing.

[73] See, for example, Timerbaev, *The Nuclear Suppliers Group,* p.20.

segments of the fuel cycle."[74] A mere six months later, in June 1977, West Germany also announced its intent not to export any more reprocessing plants, although it still refused to cancel the deal with Brazil.

At the same time as the French commitment to nonproliferation was hardening, the November Presidential elections in the US had made nuclear non-proliferation a central issue. Ford had solidified his Administration's commitment to nuclear nonproliferation in his nuclear policy statement that October.[75] The election of Jimmy Carter, who in his inaugural address promised to "move this year a step towards our ultimate goal – the elimination of all nuclear weapons from this earth"[76] entrenched the continuing centrality of nonproliferation in the US Administration both internationally and domestically.[77] Private studies, such as that by the Ford Foundation/Mitre Corporation published in 1977, were also important in maintaining the prominence of nuclear nonproliferation issues.[78] The nuclear nonproliferation policy of the Carter Administration was, in fact, credited as having been "heavily influenced"[79] by the recommendations of the study, which supported the notion that the spread of plutonium for commercial use was incompatible with nuclear

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[74] *Strategic Survey 1976,* p.115.

[75] "Nuclear Policy Statement by Gerald R. Ford," 28 October 1976. Reprinted in *Public Papers of the Presidents of the United States: Gerald R. Ford, 1976* (Washington, D.C.: US GPO; 1977), pp.2763-68.

[76] Jimmy Carter, *Keeping the Faith: Memoirs of a President,* (Toronto, New York, London, Sydney: Bantam Books; 1982), p.20.

[77] The support given by the President himself to domestic legislation such as the Nuclear Non-Proliferation Act of 1977 – which called for a re-negotiation of previous contracts and full-scope safeguards on all reprocessing – was evident in the support he gave to the Act in his speech to Congress (See President Jimmy Carter's Message to Congress on the proposed Nuclear Non-Proliferation Act, April 27th, 1977, reprinted in Brenner, *Nuclear Power and Non-Proliferation,* Appendix F, pp.289-290.). As a piece of domestic legislation, however, the NNPA has little to do with any regime change that occurred, other than to demonstrate the continuing precedence granted to nuclear nonproliferation issues under the Carter Administration.

[78] *Nuclear Power: Issues and Choices,* (Cambridge, MA.: Ballinger Publishing Company; 1977).

[79] *Strategic Survey 1977,* (London: International Institute for Strategic Studies; 1978), p.108.

nonproliferation. With the French position beginning to shift towards a supplier agreement and American determination to achieve such an agreement reinvigorated in the new Administration, the year therefore saw the continuing internationalisation of efforts to solve the problems raised by the Indian test and the formalisation these solutions in the form of a suppliers' agreement.

The Nuclear Suppliers' Guidelines...

"By mid-1977", it was observed, "despite their very different starting points, it was clear that Western European export policies had substantially converged."[80] The adoption of the Guidelines for nuclear transfers came about in September 1977, the full text being published in February 1978. The initial group of suppliers had expanded in the previous year to include eight further members,[81] and in the absence of the vocal discontent on the part of France (which had hitherto stalled such progress), even a reluctant West Germany was persuaded to adopt the Guidelines.

These Guidelines were concerned, primarily, to establish "fundamental principles for safeguards and export control."[82] In a nod to the Indian test, the first principle articulated a new prohibition on nuclear explosives, requiring that the supplier gain "formal governmental assurances from recipients explicitly excluding uses which would result in any nuclear explosive device."[83] The NSG also attempted to prevent nuclear proliferation by necessitating that provisions be made for the

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[80] Fischer, *Stopping the Spread of Nuclear Weapons,* p.91.

[81] These new members were Belgium, East Germany, Italy, the Netherlands, Poland, Czechoslovakia, Switzerland, and Sweden.

[82] *Guidelines for nuclear transfers, the Nuclear Suppliers' Group,* para.1. Reprinted in Brenner, *Nuclear Power and Non-Proliferation,* Appendix I, pp.296-299.

[83] Ibid., para.2.

physical protection of materials to prevent "unauthorized use and handling."[84] Most importantly, however, the Guidelines incorporated a "trigger list" of technologies which should require safeguards. They also obliged the supplier state to

> exercise restraint in the transfer of sensitive facilities, technology and weapons-usable materials. If enrichment or reprocessing facilities, equipment or technology are to be transferred, suppliers should encourage recipients to accept, as an alternative to national plants, supplier involvement and/or other appropriate multi-national participation in resulting facilities.[85]

While these were not quite the full-scope safeguards hoped for by the United States, USSR, and UK, paragraph 7 (and the rest of the Guidelines) nonetheless created obligations on the part of the nuclear suppliers, as well as the recipient state, when transferring sensitive (or proliferation-prone) technologies such as those for "reprocessing, enrichment, or heavy water production."[86]

The creation of these new obligations was far from lost on countries who found themselves outside the sacred inner circle and who saw the NSG as a threat to their own nuclear development. The disputes between suppliers and recipients threatened to inflict real damage to the nonproliferation regime. The creation – at the behest of the United States – of the International Fuel Cycle Evaluation programme, or INFCE, was the American response.[87] This programme, which began in October

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[84] Ibid., para.3.

[85] Ibid., para.7. It is worth noting here that the notion of a multinational fuel-cycle centre is an example of a measure which, though much discussed, was not eventually adopted, demonstrating that some proposals for regime development end up being rejected.

[86] Ibid., para.6(a).

[87] INFCE, in fact, began its life as the International Fuel Cycle Evaluation Programme, or INCEP, until the French pointed out that the "Programme" part of the title was redundant. The 'P' was subsequently dropped, rendering the acronym simultaneously more sensible and less pronounceable. INFCE was not exclusively a reaction against the NSG. The Carter administration had, of course, pushed for an end to all reprocessing by all states. INFCE also enabled the US to retreat from this more fundamentalist position.

1977 and concluded in February 1980, began life as an attempt to allay fears of rampant plutonium production by identifying a less proliferation-prone fuel cycle. This soon changed focus and became "a forum for discussing technical, economic and institutional aspects of nuclear trade and development."[88] It also served as a means by which to soothe tempers inflamed by the creation of the NSG. INFCE has been credited, in the words of one member of the Carter Administration, with helping "to restore a basis for consensus on the refurbished regime for the international fuel cycle."[89] This may be a generous assessment of the proceedings, especially with reference to the word 'consensus.' In fact, INFCE failed to publish any 'answers' or, for that matter, arrive at any commonly agreed conclusions. It has, for example, also been suggested that the beneficial cooling of tempers owed itself equally to the possibility that three years of discussion simply bored the participants into silence.[90]

However, and despite the inability of INFCE to draw any formal conclusions, the obligations which were manifested in the Guidelines were new in the nonproliferation regime. Along with other developments in the normative framework, they helped to demonstrate, firstly, that a significant development in the norms, principles and structures of the regime had taken place and that, therefore, a pattern of regime change may be demonstrated which challenges the assumptions of change in regime theory.

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[88] Walker and Lönnroth, *Nuclear Power Struggles,* p.41.

[89] Nye, *Maintaining a Nonproliferation Regime,* p.25.

[90] This particular suggestion of a reason for the failure of INFCE to come to any formal conclusions was made by Professor William Walker.

The History and Outcome of the Shock: a case of regime change?

The preceding narrative allows us to answer the first question of the three posed in the previous chapter: whether or not genuine regime change can be said to have occurred – and the regime to have developed in a non-incremental manner. To this end it has first been necessary to establish whether or not the years immediately following the Indian test indicated regime change and not merely the addition or subtraction of a few rules. Secondly, the overall narrative on the years before and following the shock allows us to answer the question of whether or not this then indicates an overall pattern of regime development which confirms or contradicts such understandings of change in regime theory generally. The events which followed in the wake of the Indian test do indeed demonstrate that genuine and rapid regime change had occurred. Accepted proliferation expectations – that access to peaceful technology could be separated from military and that industrialised states were the primary proliferation risk – had been formalized in 1968 and had then been shattered six years later by the Indian test. It may further be argued, in the light of the narrative of the years following the test, that the regime underwent an initial post-shock period of disagreement, or diverging expectations, before a reconvergence of expectations occurred *in the form of* a period of significant change to the norms, principle, rules and decision-making procedures which had prevailed in the years before 1974. Moreover, and given that such regime change did occur following a period of regime inactivity, a non-incremental example of regime change has indeed been demonstrated which is, as noted in the previous chapter, problematic for the understandings of change in regime theory.

As the discussion has thus far demonstrated, the elaboration of the international nuclear nonproliferation regime following the shock of the Indian test came in the form of the establishment of a formal suppliers group and the resultant guidelines which members were to observe. The creation of the NSG, self-evidently, involved the creation of a new institution in the regime. This, in turn, involved a significant expansion of the regime's rules and decision-making procedures. Not only did it incorporate a formal trigger list to activate safeguards, but it also required that the supplier obtain assurances from the recipient state as to the intended function of the equipment or technology received. One paragraph, for example, required the supplier to ensure that any enrichment facility or technology supplied will not "be designed or operated for the production of greater than 20 percent enriched uranium without the consent of the supplier nation, of which the IAEA should be advised."[91] In addition, the Guidelines contained new decision-making procedures such as those which – in the event of a suspected violation of supplier/recipient understandings – declared that "suppliers should consult promptly through diplomatic channels in order to determine and assess the reality and extent of the alleged violation."[92] The NSG, in other words, was more than merely an addendum to existing rules and decision-making procedures, but the creation and institutionalisation of the new capacity of the regime to regulate nuclear transfers.

The NSG also stood both as an example and a reflection of changed norms and principles. As the previous chapter stated, the norms of a regime refer broadly to those rights and obligations of the regime participants which proscribe or prescribe certain behaviour. In keeping with this definition, the NSG represented the institutionalisation of a new norm in the nonproliferation regime. Although Article

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[91] *Guidelines for nuclear transfers, the Nuclear Suppliers' Group,* para.8.

III.2 of the NPT established obligations on the part of nuclear suppliers, the NSG formally placed the norm of nonproliferation over the commercial gain. While India was not a member of this treaty, the test explosion nonetheless demonstrated that the prevention of proliferation would be hampered if responsibility continued to be placed, *de facto*, only on the recipient state. To this end, the Guidelines required suppliers "to demand from their recipients pledges of non-use of received materials for the development of any explosive device."[93] Thus – in calling for suppliers to "exercise restraint in the transfer of sensitive facilities"[94] – the NSG emphasised the rights and obligations of *supplier* states to prevent proliferation. By their very existence, the Guidelines pointed to a belief in suppliers' obligations not to indulge in unfettered competition at the expense of nonproliferation objectives. While obligations of recipient states under the NPT not to use imported technology to proliferation remained intact, the test explosion by a non-NPT recipient state therefore led to change in the obligations of supplier states. Consequently, the norms surrounding the transfer of technology and equipment had changed and, in the form of the NSG, placed formal obligations and instituted standards of behaviour on nuclear suppliers as well as recipients.

In addition, the establishment of the NSG indicated a change to the principles – the beliefs about the basic facts and causal relationships – of the regime. The decision by the Indians to label their test a 'peaceful' nuclear explosion resulted in the undermining and alteration of the principles laid down in 1953 in Eisenhower's Atoms for Peace plan. The goal, as articulated by the President, was to take atomic

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[92] Ibid., para.14(c).

[93] Statement of Igor Morokhov, head of the Soviet delegation at the plenary session of the First NPT Review Conference, 6 May 1975, quoted in Timerbaev, *The Nuclear Suppliers' Group,* p.32.

[94] Ibid., para.7.

power and "strip its military casing and adapt it to the arts of peace"[95] thus making its rewards available to all. This belief, moreover, was enshrined in the preamble of the NPT, which affirmed

> the principle that the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be available for peaceful purposes to all Parties to the Treaty, whether nuclear-weapon or non-nuclear-weapon States.[96]

The Indian test, however, damaged confidence in the principle, laid out in the Atoms for Peace plan and enshrined in the NPT, that a meaningful distinction could and should be made between peaceful and military nuclear technology. Although the right of access to peaceful nuclear technology was reaffirmed in the Final Declaration of the first NPT Review Conference, the shock – together with growing fears of freer access to plutonium worldwide – nonetheless brought about a return to the policy of denial which ran counter to the idealism of the policies of the Atoms for Peace plan. The 'peaceful' nuclear explosion encouraged the creation of the NSG by making it clear that there was "no essential technical difference between a nuclear explosive intended for peaceful purposes and one intended for waging war."[97] In the American Congress, as noted previously, concerns were expressed at the Indian illustration of, in the words of one Senator, "what can happen to what was, indeed, a very fine concept....the peaceful uses of atomic energy."[98] Kissinger's assertion that the policy of peaceful nuclear assistance "cannot continue if it leads to the proliferation of

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[95] "Atomic Power for Peace," Address by Dwight D. Eisenhower, President of the United States before the General Assembly of the United Nations, December 8th, 1953. Reprinted in Joseph F. Pilat et.al., *Atoms for Peace*, Appendix C. pp.283-291.

[96] *Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty),* preamble.

[97] William Epstein, "The Proliferation of Nuclear Weapons," *Scientific American*, vol.232, no.4, April 1975, p.18

[98] *Exports of Nuclear Materials and Technology*, p.26 (Speaker: Senator Henry Jackson).

nuclear explosives"[99] confirmed this change. The NSG did not, *per se*, resurrect the policy of denial which had preceded the Atoms for Peace plan. The Guidelines did, however, place stricter regulations on nuclear trade and establish a notion of "restraint" in such dealings. In so doing, it represented a change in the belief that access to 'peaceful' nuclear technology could be kept independent of access to military benefits. Consequently, the shock of the Indian test apparently "brought to an end two decades of stability under the rules of nuclear ethics and international cooperation ushered in by President Eisenhower's Atoms for Peace Plan."[100] The principle of the right of access to peaceful technology enshrined in the NPT was not abandoned. However, in practical terms the institutionalisation of trade restraints by the NSG stood as evidence that this principle had been altered in the face of the challenge posed by the Indian test. Furthermore, the very meaning ascribed to the word "proliferation" appeared to have undergone a change, following the events of 1974. Previously, and as manifested in the NPT, it applied mainly to the spread of nuclear weapons. Henceforth, it would apply also to the spread of technologies and materials relevant to the manufacture of weapons. In keeping with this, evidence of proliferation expanded to include not only explosive testing, but also the acquisition of reprocessing and enrichment technology, in particular.

Conclusions:

By constructing a history of the events in the nuclear nonproliferation regime before, during, and after the shock of the 1974 Indian nuclear test, the preceding discussion has shown that the regime activity which occurred in the wake of the shock – the NSG – was more than merely an incremental elaboration of the rules and

[99] "Address by Secretary of State Henry Kissinger," September 23rd, 1974.

decision-making procedure in the nonproliferation regime. Rather, an entirely new institution had been created to support the regime which contained both new rules and new decision-making procedures and, crucially, reflected an alteration in the norms and principles which had previously prevailed. The years following the Indian test have been shown to bring about a change in the obligations of supplier states. Speaking in 1979, Senator John Glenn observed that "a new policy has emerged within the United States designed to raise the consciousness level of the world to the dangers of nuclear proliferation and to slow down the spread of nuclear weapons."[101] The Guidelines codified the emerging norm that not only recipient states, but also supplier states, were obliged to be pro-active in preventing proliferation by exercising restraint in their dealings. In addition, the effective return to a policy of (selective) denial and control upon which the NSG was premised, demonstrated a change in the principle of a distinction between the peaceful and military atom and thus a change in the absolute nature of the principle of peaceful nuclear assistance. The re-establishment, then, of a policy of denial therefore demonstrated that the regime had, for the time being at least, "replaced the assumption of qualified trust that underlay the NPT with the assumption of unqualified mistrust."[102] The principle of Atoms for Peace, enshrined in the preamble of the NPT, had also undergone a change.

As such, the regime activity which took place in the years immediately following the Indian test appear to be not merely the addition of a few new rules, but

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[100] Bertrand Goldschmidt, "From Nuclear Middle Ages to Nuclear Renaissance," in Pilat et.al., *Atoms for Peace,* p.111.

[101] *Nuclear Proliferation: The Situation in India and Pakistan*, Hearing before the Subcommittee on Energy, Nuclear Proliferation and Federal Services, of the Committee on Governmental Affairs, United States Senate, Ninety-sixth Congress, first session, May 1, 1979., p.1.

[102] Walker and Lönnroth, *Nuclear Power Struggles,* p.39.

rather to consist of significant regime development. Moreover, and as the section dealing with the history of the regime in the years before the test showed, this regime change occurred after a period of comparative regime inactivity prior to the shock. It was observed that the years between the establishment of the regime and the Indian test (1968-1974) had seen little activity. Certainly, the years immediately prior to the test – after the establishment of INFCIRC/153 in 1971 – had seen no change other than an expansion in the number of NPT participants. The narrative dealing with the years immediately after the shock, by comparison, has revealed that considerable regime change occurred in the space of three and a half years. In other words, it has been possible to establish that the change to the regime involved a divergence and reconvergence of actor expectations resulting in a non-incremental pattern of development. It is this pattern which, as the previous chapter demonstrated, presents a challenge both to the general neglect of regime change and to the assumptions of the manner of regime development present in regime theory.

The discussion of the 1974 Indian test, however, remains incomplete. The preceding narrative has not only been necessary to establish the occurrence of genuine regime change as part of a broader, non-incremental pattern of development, but also provides the discussion with a basis for answering the other questions posed at the outset. It is already clear, from this chapter, that the second question posed in the introduction – of whether it may be assumed a shock necessarily leads to change – has not been undermined by the outcome of the Indian test. The answer, thus far, appears to be that such an assumption would still be valid. However, the narrative of this chapter will also provide a basis for the ensuing discussion of the third question posed in the introduction – how the translation of the shock into regime change may be understood.

Chapter 3: The 1974 Indian Nuclear Test – Understanding Regime Change

The narrative of the years immediately prior to and following the Indian test explosion in 1974 indicated a non-incremental pattern of regime development. The Indian test occurred after a period of comparative regime inactivity and was followed by the creation of the NSG. To leave the discussion of the shock there, however, would be to ignore the possibility of understanding why the shock was translated into the kind of significant regime development which has been shown to have occurred. The previous chapter, in seeking to establish or refute a pattern of regime change, provided a narrative of the way in which the shock was internationalised and how – in this international context – change to the regime was subsequently negotiated. The thesis, however, also seeks to understand why consequent regime change occurred, and in the rapid manner that it did.

Certainly, it is not self-evident that the events of 1974 should have been considered of such significance that concrete actions were required. Yet such a determination was made. In spite of the fact that "no safeguards agreement or NPT commitments were broken by the Indian nuclear explosion, the event cast doubt on the adequacy of the entire structure of nonproliferation restraints."[1] The eventual effects of the shock on the regime can be seen to have originated with American concern and the whole episode was ultimately to become "one of the most significant recent assertions of Congressional power over US foreign

[1] Goldschmidt and Kratzer, *Peaceful Nuclear Relations: A Study of the Creation and Erosion of Confidence*, (New York and London: The Rockefeller Foundation/The Royal Institute of International Affairs; 1978), p.73.

policy."[2] The fact that countries such as Canada felt as strongly about the need for change as the United States eventually did was important, but hardly decisive. In addition, it has been shown that France and West Germany not only had little interest in the type and extent of regime change desired by the United States but, during the first two and a half years after the Indian test, actively fought against it.

Simplistically, the answer to the question of how to understand why the Indian test eventually prompted significant regime change is that the United States (with the support of states such as the USSR and UK) became interested in the subject and by turns persuaded and harangued those who were not into agreeing to the changes that were made. In order to understand the outcome of the shock, the subject of greatest interest is not the opponents of change, but those who initiated it and who, in the end, forced it through.

Simply to say that the regime change which occurred may be understood as the will of the United States, however, is insufficient to explain why the United States, and eventually the reluctant holdouts, responded to the shock in the way that they did. To do this, it is necessary to illuminate the circumstances and interpretations of the shock which allowed such change to occur.

Understanding of Danger:

The first of these interpretations is one which, however important, stands as self-evident. The internationalisation of the shock, and the consequent regime change which occurred suggests the acceptance of a belief that the Indian test was not an innocuous act, Rather, it was considered to represent a more general danger of proliferation, and thereby threatened the credibility of any regime

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[2] Williams, "The United States and Non-proliferation," p.45.

designed to prevent such things. There is little benefit (and, as the history of the aftermath of the Indian test demonstrated, a great deal of difficulty) in bringing about changes to the wider regime if the risks revealed by the shock are seen simply to be the product of a unique occurrence. If the problems exposed by the Indian test were confined to India and to the hazard thereby posed by that state, then efforts to deal with it could be limited to responses which were more easily implemented, such as unilateral sanctions, diplomatic withdrawals, and so on. Fundamentally, if the Indian test was not understood as creating or illuminating wider danger, then no action need be taken. It is only if the shock is interpreted as a precedent-setting occurrence which, crucially, undermines the stability and credibility of an international regime that multilateral change need be initiated. The alteration of safeguards, the creation of exporters guidelines and multilateral diplomatic wrangling are understandable only if the Indian test was believed to be the potential inspiration for similar incidents which must be prevented in order to preserve the credibility of the regime designed to prevent such things. It is this understanding of the danger which one would therefore expect to find pervading the reaction in the United States, the originator of such change.

However, as one author noted, the reaction of the American Administration was "tardy and low-key."[3] Mired as it was in the Watergate scandal, this is perhaps hardly surprising. In addition, it was not initially clear whether the explosion should, as one author put it, "be treated as a bomb or somehow re-defined as a non-bomb."[4] However, it has become clear that this apparent indifference to the shock was not shared by the American Congress,

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[3] Brenner, *Nuclear Power and Non-Proliferation,* p.68.

[4] George H. Quester, "Nuclear Non-Proliferation," *The Journal of International Affairs,* vol.40, no.1, Summer 1986, p.181.

which was "shaken out of its somnolent state"[5] by the test. Indeed, it was declared that "the US Congress in particular was stunned by the Indian 'betrayal of trust'."[6] As a consequence, the Indian test inspired a wealth of activity in Congress which exerted unwavering and prolonged pressure on the Ford Administration to act. Furthermore, fears that the Indian test would open the door to a host of future proliferators were expressed almost immediately following the test. From the first hearing on the subject it was observed, and went unquestioned, that the Indian test had "caused a cascade of potential nuclear powers to reconsider their politics"[7] – a situation which (in spite of India's non-NPT status) raised inevitable questions regarding the effectiveness of a regime aimed at preventing nuclear proliferation. One participant went so far as to identify the ultimate goal as "trying to legislate and see if we can avoid some more Indias."[8] The identification of the shock as representing not only a danger, but a danger derived from the likelihood of its imitation is therefore evident from the outset. After an initial hesitation, Congress "suddenly wanted clear assurances that another string of countries could not acquire nuclear weapons."[9]

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[5] Leonard Weiss, "Nuclear Safeguards: A Congressional Perspective," *Bulletin of the Atomic Scientists,* vol.34, no.3, March 1978, p.29.

[6] Joan Johnson-Freese, "Interpretations of the Nonproliferation Treaty: the US and West Germany," *Journal of International Affairs,* vol.37, no.2, Winter 1984, p.288.

[7] *Exports of Nuclear Materials and Technology* Hearings before the Subcommittee on International Finance of the Committee on Banking, Housing and Urban Affairs, United States, Congress, Senate, Ninety-third Congress, second session (On Export Policy, Control, and Credits with particular attention to exports of nuclear technology and nuclear materials) July 12 & 15, 1974. p.2 (speaker: Senator Adlai Stevenson III).

[8] Ibid., p.24 (speaker: Senator Jackson).

[9] Quester, "Nuclear Non-Proliferation," p.185.

In spite of the rather grandiose claim by one hawkish Indian academic that India, after its test, "constitutes a higher stake to big Powers in international politics"[10], Congressional fears emphasized the fact that the door had been opened, rather than focusing on the state which had opened it. Instead of focusing attention on India, "doubts clustered around a number of hypothetical scenarios rather than about any specific country."[11] "The Indian explosion" it was again declared in the first Senate hearings, "has really rocked the world in a sense of what can happen."[12]

This theme continued throughout further hearings into the implications of the 1974 test and the future of nuclear proliferation. Senator Symington identified the basis of concern as the fact that "the recent Indian nuclear explosion demonstrated dramatically that a country can develop nuclear explosives without any economy-breaking national drive."[13] Concern was then repeatedly expressed about the intentions of Iran, Egypt, Pakistan, Argentina and Brazil[14] and there was common agreement that, as it was still being asserted in 1977, "we will probably see more of this in the future if we are not careful."[15]

However, such convictions were not confined to Congress, although the

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[10] K. Subrahmanyam "The Indian Nuclear Explosion and its Impact on Security," *India Quarterly,* vol.30, no.4, October-December 1974, p.260.

[11] Fischer, *Stopping the Spread of Nuclear Weapons,* p.59.

[12] *Exports of Nuclear Materials and Technology,* p.26 (speaker: Senator Jackson).

[13] *Nonproliferation Issues* , p.1.

[14] Indeed, and as will be discussed later, the intentions of Pakistan and Brazil, and the deals they had struck with France and West Germany respectively, were to be crucial in underscoring this sense of India as having released the genie from the bottle.

[15] *The Nuclear Anti-proliferation Act of 1977*, Hearings and markup before the Committee on International Relations, House of Representatives and its Subcommittees on International Security and Scientific Affairs and on International Economic Policy and Trade. Ninety-fifth Congress, first session, April 4, May 19 & 26, July 27 & 29, August 1 & 2, 1977., p. 87. (speaker: Senator John Glenn).

post-Watergate Administration remained slow to acknowledge the shock's implications. Nonetheless, it is misleading to overstate the contrast between the Ford and Carter era. Despite the slow start, both Administrations became convinced that the shock had consequences which extended far beyond India. Although one author declared that Secretary of State Kissinger's "natural preference was for doing nothing"[16], the months following the Indian test and the first Congressional hearings on the subject, saw his concern over the issue of nuclear nonproliferation raised sufficiently for him to express his conviction – before the UN General Assembly – that "[previous] policy cannot continue if it leads to the proliferation of nuclear explosives."[17] This increasing concern within the Ford Administration regarding the dangerous precedent India had set, was eventually expressed in the President's statement on nuclear policy. In it Ford stated that in the absence of corrective action,

> nuclear proliferation will accelerate as nations initially having no intention of acquiring nuclear weapons conclude that they are forced to do so *by the actions of others* [my italics]. Should this happen, we would face a world in which the security of all is critically imperilled.[18]

The general acceptance of the shock as establishing a dangerous precedent (thus undermining the effectiveness of the regime) also pervaded the security

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[16] Brenner, *Nuclear Power and Non-Proliferation,* p.68.

[17] "An Age of Interdependence: Common Disaster or Community", Address by Secretary of State Henry Kissinger before the 29th UN General Assembly, September 23rd, 1974. Reprinted in *Peaceful Nuclear Exports and Weapons Proliferation*, p.815. Although there is little evidence that Kissinger himself was in any way sent into a panic by the Indian test, his address to the UN and his subsequent haranguing of the French and West Germans over their respective nuclear deals (discussed later) does appear to mitigate somewhat against Brenner's assertion that "Kissinger's natural preference was for doing nothing" (Brenner *Nuclear Power and Non-Proliferation*, p.69), only acting "when forced to intercede" (p.71).

[18] *Public Papers of the Presidents: Gerald R. Ford (Containing the Public Messages, Speeches, and Statements of the President*), 1976, document 987, p. 2763.

establishment. An internal paper of the United States Mission to NATO a month after the test expressed the fear that "the Indian example...could make it easier for others to follow suit, claiming that they too are following the route of 'peaceful' accession to nuclear power status."[19] Still more importantly, in his testimony before the spate of hearings between March 1975 and November 1976, the Assistant Secretary of Defense for International Security Affairs, claimed that the Indian test was problematic in the sense that "further proliferation would have serious implications for the United States."[20] Further evidence that such concerns were growing was revealed the following March. At this time, *The Washington Star* printed an interview with Fred C. Iklé (head of the Arms Control and Disarmament Agency) in which he was asked whether the wave of concern generated by the Indian test was exaggerated. Iklé replied that

> if anything the situation has become more serious. The right way to look at this next step in proliferation, the Indian explosion, is not that India is number six in a so-called nuclear club, but in a way it's number one among a great many countries to come, maybe 10, 20 countries.[21]

The understanding of the danger posed by the Indian test had, after an initial hesitation, moved outside Congress and into the Executive.

The existence of such sentiments were frequently alluded to in other fora. One author called for immediate action "to see whether fingers cannot be burned a little less often in the future."[22] Less than a year later, in the same journal, the identical opinion was again expressed, citing a prevailing concern that "the crucial

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[19] *Internal Paper of the US Mission to NATO,* June 5th, 1974, para. 2.D, reprinted in Appendix Q in *Nuclear Proliferation: The US-Indian Conflict* (New Delhi: Orient Langman Ltd.; 1993).

[20] *Nonproliferation Issues,* p.243 (speaker: testimony of Robert Ellsworth, Assistant Secretary of Defense, International Security Affairs, Department of Defense).

[21] *Washington Star,* 12 March 1975

new reality is thus not merely the existence of a sixth (or seventh) nuclear power; it is above all the altered prediction that influential people around the world are making as a consequence."[23] The Executive-Director of the Arms Control Association in Washington, D.C. contributed one article entitled "The spread of nuclear weapons – is the dam about to burst?"[24] concluding, not surprisingly, that it was. An annual survey by one journal observed this – and reflected the understanding of the danger revealed by the shock – when it noted that the explosion had essentially destroyed "the assumption of previous years that somehow the spread of nuclear weapons could be halted."[25]

As asserted above, the pursuit of regime change cannot be understood in the absence of a belief on the part of the initiators of such change that not only is the event itself dangerous, but that much of its danger lies in the potential for imitation. While the narrative revealed little evidence that countries such as France and West Germany felt initially concerned by the Indian test, (the French telegram of congratulations to India being a case in point) the American reaction indicated a generally-held belief that the Indian test presaged a flood of proliferation, a state of affairs which necessarily undermined the credibility of the nonproliferation regime and the NPT as well as posing obvious strategic risks to

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[22] George H. Quester "Can Proliferation Now Be Stopped?" *Foreign Affairs* vol.53, no.1 (1974) p.94.

[23] Lincoln P. Bloomfield "Nuclear Spread and World Order," *Foreign Affairs,* vol. 53, no.4 July, 1975, p.743

[24] Thomas A. Halsted "The Spread of Nuclear Weapons – is the dam about to burst?" *Bulletin of the Atomic Scientists* vol.31, no.5 May 1975.

[25] *Strategic Survey 1974*, (London: International Institute of Security Studies; 1975), p.33. Newspapers, too, reflected concerns over the future of the spread of nuclear weapons in light of the Indian test. *The Washington Post* (19 May 1974) stated that "what worries experts...is that India's action could trigger similar moves by as many as half a dozen countries that have the materials, personnel, money and motives to develop and explode atomic bombs." *The New York Times* (26 May 1974), chose to treat its readers to a list of the next likely candidates (both NPT

the United States. The Soviet Union, while remaining relatively quiet on the subject, nonetheless appeared to share the concerns of the United States. While looking favourably on India, a former member of the Ministry of Foreign Affairs recalled that the USSR was nonetheless worried, "mostly because of further challenges to nonproliferation."[26] France and West Germany, by contrast, considered their interests more likely to be harmed by the apparent American determination to cling to a failing nuclear monopoly and freeze others out. The United States came to believe that the Indian test had opened a Pandora's box which must be closed to prevent further escapes. In this it was supported by the USSR and UK, among others.

Understanding of Responsibility:

The acceptance, by the United States, of the precedent posed by the Indian test is certainly useful in understanding the decision to internationalise the response to the shock. It became clear that effective action could not simply be confined to unilateral sanctions (as indeed they were not). However, an acceptance that the shock has both damaged the credibility of, and poses a future danger to, the regime does not explain why regime change was able to proceed. As the previous chapter showed, the concerns over the Atoms for Peace program paved the way for a reintroduction of the policies of denial and control. In 1978 it was observed that

> for more than 20 years, the United States pursued [the nuclear market] on the theory that the combination of bilateral and international inspections would provide

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and non-NPT) to join the nuclear weapons club, citing Brazil, Canada, Japan, Australia, West Germany, Israel, Iran, Pakistan, and Sweden.

[26] Roland Timerbaev, interview via e-mail, 17 December 1999.

> adequate protection against diversion to military purposes...
> That notion has now been pretty much put to rest.[27]

It was further demonstrated that the international initiatives for regime change began in the United States, albeit supported by the USSR, the UK, Canada and others. The Indian test had provoked debate within the United States regarding the distinction between peaceful and military atomic power which lay at the heart of Atoms for Peace. The result, in the form of the NSG, was a sharp break by the US with an American approach which had prevailed since 1954. This movement away from the Atoms for Peace programme indicates an acceptance of the need to lead the changes to the regime deemed necessary. It is just such a belief, therefore, that one would expect to see supported in the relevant literature.

The narrative of the years immediately following the shock – and the type of changes that occurred – certainly support such an interpretation. Without a sense of responsibility for effecting solutions, it is difficult to countenance action being taken and regime change occurring as a result. The regime change which occurred, in other words, did not simply happen of its own accord, but reflected a desire by key actors for such change and a willingness to bring it about.

This is supported by the actions, or lack thereof, on the part of states such as France and West Germany. Far from leading or initiating movement towards regime change, these two suppliers only participated – for the most part reluctantly – in the supplier talks. Just as the existence of US initiatives hints at an American understanding of responsibility for closing the loopholes exposed,

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[27] Victor Gilinsky, "Plutonium, Proliferation and the Price of Reprocessing," *Foreign Affairs*, vol.57, no.2, Winter 1978/79, p.377.

the unenthusiastic participation of France and West Germany hints at the opposite: a lack of belief in a need to take such responsibility.

The acceptance of some level of blame for the shock was acknowledged in Congress and in the press, eventually influencing the policy of the Administration. It was during this time that "the public and congressional outcry over the Indian test had created irresistible pressure to rewrite the rules governing nuclear exports."[28] A significant proportion of that outcry involved breast-beating over the previous thirty years of American nuclear policy and its assistance to India and those deemed likely to follow her.

In Congress, it will be recalled, this self-chastisement began slowly with the first hearings in July of 1974, "grew for a thorough-going analysis of the proliferation implications of the 'nuclear juggernaut,'"[29] and reached its apex with the revelations surrounding the use of American heavy water by the Indians. Although far from conclusive, the disclosures strengthened the determination in the United States to galvanise the rest of the supplier nations into agreeing common principles for nuclear trade. It was suggested, initially somewhat tentatively, that "the standards that we have applied apparently are not adequate"[30] – an assertion that was met with basic, if confused agreement. At the time of the hearing, the representative of the AEC and indeed the AEC itself, was unwilling to admit to an American contribution to India's nuclear programme, reflecting what has been described as the "benign AEC attitude toward

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[28] Brenner, *Nuclear Power and Non-Proliferation*, p.71.

[29] Robert L. Beckman, *Congress and the Control of Peaceful Nuclear Activities,* (Boulder and London: Westview Press, Inc.; 1985), p.224.

[30] *Exports of Nuclear Materials and Technology*, 12 & 15 July 1974, p.24 (speaker: Senator Jackson).

reprocessing's possible contribution to weapons spread."[31] This scepticism regarding American responsibility was encapsulated by the testimony of John H. Pender (assistant general council of the AEC) at that first hearing, when he declared confidently that "if Canada had earlier followed the policy we had, at least they would have known at a very early date what the Indians were doing with their own natural uranium that was coming out of the reactor."[32] Nonetheless, a sufficient level of unease existed to merit the additional claim by one Senator that "at the present time the United States does not have a coherent nuclear export policy – unless it is to promote the indiscriminate sale of nuclear facilities abroad."[33] The newspapers, on the other hand, were initially placated by the fact that "US officials expressed strong doubts...that India used fissionable material originating in this country to detonate its first nuclear explosion."[34]

As early as the start of 1975, such uncertainty was giving way to vociferous and passionate avowals of past neglect and the desire to make amends by taking the initiative in the face of the apathy considered to reign in Western Europe. The eight hearings on the subject which took place between March of 1975 and November 1976, heavily emphasised the growing belief that, as one Representative later wrote, "the Indian case illustrates the 'wrongheadedness' of American policy."[35] The Atoms for Peace plan, in particular, was held up as the source of recent and future proliferation, not only by members of Congress but

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[31] Brenner, *Nuclear Power and Non-Proliferation*, p.70.

[32] *Exports of Nuclear Materials and Technology*, hearings of 12 & 15 July 1974, p.40 (speaker: John H. Pender, Assistant General Council of the Atomic Energy Commission).

[33] Ibid., p.1

[34] *Washington Post*, 21 May 1974. (Also in the *New York Times* and *Los Angeles Times* of the same date).

also, and significantly, by those testifying before them. These differed sharply in tone from the confusion and hesitancy which pervaded the discussion of responsibility in the hearings of the previous July. Dean Adrian Fisher of Georgetown Law School observed, in the hearings of March 1975, that "through peaceful nuclear explosions I think we have created a Frankenstein's monster, and we are Frankenstein. In other words, we created this problem."[36]

Such language was far from exceptional during the course of the hearings. The movement of such questions from the periphery of American concern to a place in the Congressional limelight was accompanied by extensive and increasing hand-wringing over the role of American nuclear policy and the belief in the need for the United States to lead changes to the regime.[37] Perhaps the best description of this fresh outlook on the problem of nuclear proliferation was provided by Brenner, who noted that

> congressional discovery that proliferation might be an imminent danger, and one encouraged by a less-than-vigilant US government, prompted activists in both houses to make a lunge for the tail of the horse they visualized cantering out the open stable door.[38]

Such rhetoric was not simply confined to Congress. It was eventually echoed just as vigorously in major American newspapers which, even prior to the

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[35] Clarence E. Long, "Nuclear Proliferation: Can Congress Act in Time?" *International Security,* vol.1, no.4, Spring 1977, p.61.

[36] *Nonproliferation Issues,* March 19, April6 & 28, July 18 &22, October 21 & 24, 1975; February 23 & 24, March 15, September 22, November 8, 1976, p.11 (speaker: Dean Adrian Fisher, Georgetown Law School). The head of the ACDA (Fred Iklé) later concurred, commenting that "our unhappy view today [is a result] our rather generous attitude toward charing nuclear technology that began in 1954." (See *Nonproliferation Issues,* p.276). He also agreed with Senator Symington's suggestion, during the same hearings, that "it is a fair possibility that the 1954 atoms for peace plan...has turned into an atoms for war plan." (Ibid., p.274-5).

[37] One author typified the growing concern when he noted a growing recognition of the fact that "not only did the United States let the genie out of the bottle, but her salesmen have proselytized the genie's magic powers as a 'safe and cheap' source of energy supplies." (See Normal Gall, "Atoms for Brazil, Dangers for all," *Foreign Policy,* no.23, Summer 1976, p.190).

confirmation of the use of US-supplied heavy water by the Indians, proclaimed both American blame and the consequent need to take responsibility for change. In the early months of 1975, an editorial in the *Washington Post* observed that "the world's appetite for power in the next generation may compound the problem [of nuclear proliferation]...to which the United States inadvertently contributed by carelessness in the last generation."[39] Such declarations peaked during the first half of 1976, culminating with the June reports of the heavy water to India.[40] Editorials in the *New York Times* expressed sentiments along the lines that "the United States, which initiated the nuclear era and has provided dozens of nations with civilian technology, has the responsibility now to convince France and Pakistan."[41] They reiterated these appeals at regular intervals, professing again that "the United States, which invented the bomb, has a special responsibility for heading off this evolution by bringing other exporting nations to agreement."[42]

Demands grew in both the press and the Congress that the United States government should accept responsibility for the proliferation problem and take the lead in solving it. It was suggested, for example, that other nations "could all see the folly [of subsidizing nuclear proliferation] if the United States took the

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[38] Brenner, *Nuclear Power and Non-Proliferation*, p.88

[39] *The Washington Post*, 7 February 1975.

[40] See *The Washington Post*, 11 June 1976, in which Senator Abraham A. Ribicoff confirmed that there were "disturbing indications" regarding the supply of American heavy water to the Indian reactor which ultimately used to produce plutonium.

[41] *The New York Times*, 25 February 1976.

[42] *The New York Times,* 4 May 1976. One newspaper, following the revelations about the use of US heavy water, printed an article headlined "How We Gave Away Nuclear Control", in which it was declared that "the problem of nuclear proliferation is to a considerable extent a self-inflicted wound." (See *The Washington Star,* 3 April 1977).

leadership in pointing the way."[43] Officials in the State Department and National Security Council (NSC) increasingly

> saw the importance of readjusting the terms of nuclear cooperation to reduce the risk that the United States would unintentionally and unnecessarily contribute to the growth of nuclear weapons capabilities in recipient states.[44]

The momentum for change – both to American policy and multilaterally – thus snowballed during the two years following the test, and can also be seen to have coincided with increasingly determined rhetoric around the perceived limitations, or all-out failure, of Atoms for Peace and the need for American leadership. By 1977, such rhetoric then appears to have become inextricable from the discussion of how to "solve" the looming proliferation problem. Important studies such as that by the Nuclear Energy Policy Group (better known as the Ford/MITRE report) asserted that

> the early introduction of plutonium recycle and plutonium breeders has been widely believed to be critical to the economic use of uranium and nuclear power. These beliefs have been encouraged by the emphasis on these programs in the nuclear development activities of the United States and other principal nuclear suppliers. If the nuclear fuel cycle is to be controlled internationally, other countries will have to be convinced that there are no significant economic penalties in deferring these technologies. This will be hard to do if the United States is proceeding with reprocessing and breeder commercialization.[45]

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[43] Long, "Nuclear Proliferation: Can Congress Act in Time?", p.76.

[44] Brenner, *Nuclear Power and Non-Proliferation*, p.70.

[45] Report of the Nuclear Energy Policy Study Group. *Nuclear Power: Issues and Choices* p.24. This members of this group, among others, included Spurgeon M. Keeny (chairman of the MITRE Corporation and soon Deputy Director of the ACDA; Albert Carnsale, who was appointed to membership of the Nuclear Regulatory Commission hearing board during the course of the study; Joseph S. Nye, at the time Professor of Government at Harvard University and later, under Carter, the Deputy Undersecretary of State for Security Assistance. The Ford/MITRE study was a key document in the eyes of the Carter administration and, as Brenner observed, "there is no gainsaying...the marked influence exercised by the ideas and judgements contained in the report." Brenner, *Nuclear Power and Non-Proliferation*, p.118.

In the opinion of one witness at the 1977 hearings, the acceptance of some level of blame for the shock and the need to make amends was crucial in determining the American-led international non-proliferation effort. When asked if the revelations about US heavy water had as significant an impact on American nuclear policy as the use of Canadian reactor had had in Canada, he replied: "I think it may be fair to say the Indian explosion has had a similar effect. We have been anxious to have other nations join us in leading antiproliferation efforts."[46] In addition, the change in Administration from Ford to Carter cemented this desire for the United States to take the lead in helping to bring about changes to international nuclear policy. The question of nuclear proliferation had even become an election issue, and the result was the accession of a President who was already convinced of the dangers of nuclear proliferation, the potential problems of the spread of reprocessing and enrichment technologies and who even advocated disarmament. In his autobiography, for example, Carter recalled that "despite opposition from other suppliers of advanced technology, I wanted to do everything possible to prevent this capability from spreading."[47]

The increasing concern with the dangers of nonproliferation – evident in the consciousness-raising within Congress between 1974 and 1976 – occurred alongside the mounting unease regarding both past US policy and the future of proliferation in the absence of US leadership, indicating the importance that the understanding of responsibility played in explaining the American reaction. This understanding, and the consequent sense of the need and entitlement to demand

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[46] *The Nuclear Anti-Proliferation Act of 1977*, p.236. (speaker: Mr. Gerald F. Warburg II, Research Assistant, Office of Representative Bingham).

[47] Carter, *Keeping Faith: Memoirs of a President*, pp.215-16. In speaking of nuclear disarmament, Carter recalls that "in my inaugural address I had pledged to work toward the ultimate goal of eliminating nuclear weapons from the earth" (p.215).

and achieve change, was perhaps best articulated in 1977 by the then-ex Director of the ACDA, who maintained that

> none of these foreign countries that differ with us today on nuclear export policies would be capable of exporting nuclear technology if it had not been for the United States export policy over the last 20 years. Making the advanced technology available throughout the world has in part created the problem we are now confronting. Thus it can be argued that we have a certain moral claim, a certain claim to asking for revisions of older agreements because it was our generosity in making technology available that enabled these countries to be in the export business at all.[48]

That this sentiment found support and repeated reaffirmation in the years that followed the Indian test has been established. That such a sentiment was, furthermore, cited as a reason for nuclear policy change is an evidence of the significant (though it is not argued causal) role the understanding of responsibility played in inspiring the regime development that followed.

Understanding of Immediacy:

An account of the understanding of the danger posed and the responsibility to be taken helps to pave the way for an understanding of the eventual occurrence of regime change. It does not, however, assist in understanding the pace at which such change occurred – a characteristic which stands out in any investigation of the consequences of the Indian test. The fact that the regime underwent significant change in a bare four years following the Indian test hints at a further interpretation of the shock by the architect of that change, the United States. It implies that change to the regime was understood as something which could not – and need not – be postponed.

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[48] *The Nuclear Anti-Proliferation Act of 1977*, p.3 (speaker: Fred C. Iklé).

Certainly, the account of events following the Indian test indicated that nuclear nonproliferation regime had returned from being a relatively low priority to being at the forefront of American concerns. There was a growing awareness of not only of the need for action, but for such action be taken as soon as possible. The sudden burst of activity, in contrast to the general inactivity which had preceded the shock, indicates that change to the nuclear nonproliferation regime was seen as being of immediate necessity and as taking precedence over other concerns.

The narrative of events did make clear that the revitalisation of nonproliferation concerns in the United States were not obstructed by interests which could have postponed change to the regime. Following the Indian test – and certainly in the wake of the announcement of the French and West German deals – nuclear nonproliferation concerns were increasingly seen in the United States government as having priority over economic ones. Such an interpretation was assisted by several variables. Most obviously, it was possible to condemn the Indian test as unacceptable without harming important relations with that state. The United States had no interests in India which would have prevented these expressions of disapproval, and India's displeasure could therefore be incurred with little risk. In addition, the United States was able to provoke the displeasure of France and West Germany without causing itself damage. Although American dominance of the nuclear industry had diminished, what leverage remained was still held by the United States. Pressure could therefore be applied with no direct risk to the United States, politically or economically. Finally, of course, the relative calm which prevailed in US-Soviet relations was clearly important. Soviet acceptance, however tacit, of American initiatives in a multilateral context

was part of a broader thawing in relations between the two superpowers and facilitated attempts at regime change. American-Soviet relations, therefore, did not trump wider nuclear nonproliferation concerns and thwart the possibility of change. Regime change proceeded rapidly not simply because it was desired, but because it was possible as well. The actor responsible for leading such change appeared, rightly, to consider that no contradictory interests took precedence over the strengthening of the nonproliferation regime.

The fact that no interests were seen as mitigating against American leadership is necessary, but not sufficient. The speed of regime change hints at an acceptance, by the originators of that change, that "we are...on the fast road to nuclear proliferation and possible disaster. Yet, there is still time to act – albeit precious little time."[49] Nuclear nonproliferation was not simply understood as having importance but also as requiring immediate action.

What is still more notable is the reinforcement of such sentiments after the announcement of the Franco-Pakistani and West German-Brazilian nuclear deals. Prior to the declaration of these deals in 1975, there was only a minimal effort at consciousness-raising as regards the urgency of the situation. As the narrative of events made clear, the reaction to the Indian test could best be described as delayed. This was perhaps unsurprising, given the disinterest initially evidenced by the Administration. Initial Congressional efforts concerned themselves simply with "raising a concern, making nations realize that proliferation is a priority issue that deserves serious measures beyond business as usual."[50] Consequently,

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[49] *Nuclear Proliferation: Future US Foreign Policy Implications*, Hearings before the Subcommittee on International Relations, House of Representatives, Ninety-fourth Congress, first session, May 1, 1979. p.1.

[50] Joseph S. Nye, "Nonproliferation: A Long-Term Strategy," *Foreign Affairs,* vol.56, no.3, Winter 1977-78, p.621.

Congressional expressions of concern were typified by the petition of Senator Symington in March 1975 to Congress, which claimed that "if there is not action, and soon, the problem may become irresolvable."[51]

In 1975, however, a belief in the need for immediate action increased abruptly, in Congress as well as in the presiding Administration. Certainly, the sluggishness of the Ford administration showed signs of ending with Kissinger's claim, before the United Nations, that previous nuclear export policy could not continue. Indeed it was here that the first indications of urgency made themselves evident. Far from confining himself merely to auguring doom with the opening of Pandora's box, Kissinger asserted that an immediate response would ensure that the box could yet be closed. He stated that "this [nuclear proliferation] is not inevitable. If we act decisively now, we can still control the future."[52]

Such expressions in the months immediately following the Indian test remained unusual. The apparent change in the understanding of the necessity of action, came in 1975 with the events which acted together as a kind of reinforcement of growing concerns raised by the Indian shock. These events – the announcement of the France-Pakistan and West Germany-Brazil nuclear supply deals – were of vital significance in underscoring the need for immediate action and the folly of procrastination. In the United States, and indeed in France and West Germany, the deals were interpreted as a symbol that the previous thirty years of US nuclear hegemony were rapidly coming to an end, and that other suppliers were both willing and capable of providing technology that the United

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[51] *Peaceful Nuclear Exports and Weapons Proliferation*, p.528 (speaker: Senator Symington is quoted from the Congressional record of 13 March 1975).

[52] "An Age of Interdependence", speech by Secretary of State Henry Kissinger to the UN General Assembly [Extracts], September 23rd, 1974.

States would not.[53] It is thus claimed below that the interpretation of the nonproliferation question, which had initially been raised by the Indian test, moved toward the belief that not only must change occur, but that it must occur immediately, while the US still retained some leverage (notably with respect to enrichment services) in the international nuclear marketplace. The fact that the United States then moved to increase pressure for an elaboration of the regime consequently appears far from coincidental.

The intentions of the French and West Germans alarmed even those in Congress and in the Administration who had hitherto downplayed the idea that the Indian shock required immediate preventative action. News of the deals has been described as causing "consternation in the National Security Council and State Department."[54] Speaking on behalf of the NRC, Commissioner Kennedy said of the West German-Brazilian deal that it "is a further indication of the need to move to genuine suppliers' agreement."[55] Tellingly, Kissinger's address to the UN General Assembly in 1975 was even more ominous about the need for action than it had been a year previous. He declared that "now is the time to act. If we fail to restrain nuclear proliferation, future generations will live on a planet shadowed by nuclear catastrophe."[56] With the French and West German nuclear supply deals, it became indisputably clear that the opportunity for action was diminishing. The Congressional hearings of 1977 are consequently filled with such sentiments.

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[53] This conviction of the end of the American monopoly was summarised in a 1976 article by Paul L. Joscow, entitled "The International Nuclear Industry Today," *Foreign Affairs,* vol.54, no.4, July 1976.

[54] Brenner, *Nuclear Power and Non-Proliferation*, p.93.

[55] "Nuclear Proliferation: Future US Foreign Policy Implications," p.160.

[56] "Statement by Secretary of State Kissinger to the UN General Assembly"[Extract] in *Documents on Disarmament 1975* (Washington, D.C.: US Arms Control and Disarmament Agency; 1976), p.476.

One academic witness referred, at the beginning stage of the hearing, to this shift in outlook. He asserted that the combination of the French and West German deals, and the decline in US nuclear leadership, had "spawned a widespread feeling that time is running out, that unless action is taken in certain critical areas very soon, technology will acquire its own momentum, with extensive uncontrolled proliferation the inevitable result."[57] The sense of urgency was underscored by a representative from the National Resources Defense Council, who expressed his conviction that the French and West German deals had called attention to the need for immediate action, stating that

> it is important that the United States act now. There are, of course, potential political costs involved in this course of action. They do not outweigh the longer term benefits of a tough US initiative on nuclear weapons proliferation... the United States...can no longer afford to ignore the serious risks for our Nation's security and defense and security in the future posed by the spread of atomic bombs.[58]

Senator Symington continued in this vein, writing in one journal that "if we do not [find solutions], the arrival of Armageddon is only a matter of time."[59] In fact, accusations were made that the executive branch was moving far too slowly on the issue of nuclear proliferation. In spite of Kissinger's August 1976 attempt to convince France to become part of a nuclear suppliers' agreement, a

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[57] *The Nuclear Anti-Proliferation Act of 1977*, p.9 (speaker: Thomas L Hughes, President of the Carnegie Endowment for International Peace).

[58] *Ibid.*, p.70 (speaker: S. Jacob Scherr (Attorney, Natural Resources Defense Council). Such opinions were echoed later in the charings by one ex-Congressman who declared (perhaps hyperbolically) that "ours in an opportunity that comes to a country once in many generations...If we don't act soon, that opportunity may be lost forever." (Ibid., p.191. Speaker: Hon. Orral Hansen.)

[59] Stuart Symington (Senator) "The Washington Nuclear Mess," *International Security*, vol.1, no.3, Winter 1977, p.78.

New York Times newspaper editorial maintained that "the United States has got to get a handle on the plutonium issue at home and abroad."[60]

This shift, or rather *progression* of understanding, is reflected several figures in Congress who persistently pushed for change in nuclear export policy and for efforts to continue negotiations within the NSG. Senator Symington, one of the first to profess the belief that immediate action was required, was joined by the then-chairman of the Senate Committee on Government Operations Abraham A. Ribicoff. Ribicoff maintained that the weaknesses evident in American nonproliferation policy, "if left uncorrected, could result in the rapid spread of nuclear weapons material and capability around the world."[61] He opined that "little time remains to correct the present dangerous situation"[62] and called on the State Department to press for the "shaping of a sane, coherent and effective world policy for nuclear export control on terms fair to all."[63] Other outspoken advocates of both unilateral and multilateral action, such as Senator John Glenn, expressed the opinion that "we find the sale to Brazil going through...the sale to Pakistan going through, other sales going through, and new technologies...we do not have very long to work out these arrangements."[64]

The shock of the Indian test in 1974 undoubtedly inspired a renaissance of interest in the nuclear nonproliferation regime and a corresponding belief in the need for immediate action to change it. A contemporary NRC Commissioner observed that

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[60] *New York Times,* 28 September 1976.

[61] Abraham A. Ribicoff, "A Market-Sharing Approach to the World Nuclear Sales Problem," *Foreign Affairs,* vol.54, no.4, July 1976, p.767.

[62] *Ibid.,* p.768.

[63] *Ibid.,* p.786.

> what started as a general but vague sense of unease about where our nuclear export policies were leading us has built, over the past year, into a near-desperate flurry of activity to bring the threat of further proliferation under control.[65]

In the case of this shock, this perception appears to have been linked to the exporting intentions of France and West Germany, which served to buttress the conclusions being drawn from the initial shock of the Indian test. While it is futile to speculate whether the resulting changes to the regime would have occurred without the shock, the French and West German deals were clearly worrisome, hinting as they did that the time for action was short. These agreements solidified the belief that, as Kissinger asserted, India had indeed opened a Pandora's box and, furthermore, that its occupants were rapidly escaping and would continue to do so if debate was not promptly turned into action.

Consequently, development of the reaction to the shock into one which emphasised the need for immediate action is important for a broader understanding of the outcome. The insistence of the United States (and its allies) on supplier talks and guidelines, and the ensuing expansion of the nonproliferation regime into the realm of nuclear trade policies, occurred with surprising speed. The growing conviction both that nuclear nonproliferation, and the viability of the regime, trumped other interests and that the time for action was rapidly diminishing, stands as another important element in understanding not simply the occurrence of the regime change but the speed at which it took place.

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[64] *The NuclearAnti-Proliferation Act of 1977,* p.90.

Understanding of Solvability:

The desire for regime change and the belief that such change was urgently required are still far from sufficient for an understanding of the circumstances of regime change. The negotiations for regime change were underscored by an interpretation of the shock as raising problems which, however disturbing, had specific and workable solutions in the context of the regime. From the retrospective unease in the United States regarding the Atoms for Peace plan to the establishment of suppliers' meetings which began in 1975, it was clear that nuclear exports – and, in particular, the conditions applied to them – were viewed as the key to unlocking the proliferation problems which the Indian test had apparently foreshadowed. Indeed, the narrative of events gave no evidence of any different proposal being seriously considered. The standards applied to nuclear technology and equipment for peaceful purposes had, it has been shown, been highlighted by the Indians' use of the Canadian-supplied CIRUS reactor. As a consequence, universal nuclear export standards appeared as the way in which similar occurrences could be prevented in the future: the issues raised by the shock, it will be argued, were understood as having solutions.

This interpretation is of considerable importance in understanding both the way in which – and the speed at which – the shock of the Indian test eventually gave way to regime change. As has already been established, the shock of the Indian test gave rise to an increasing conviction, particularly in the United States, in the need for action to be taken in the context of the regime. Such an interpretation presages a belief that a correct response existed and would be successful.

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[65] Victor Gilinsky, "Plutonium, Proliferation and Policy," *Technology Review,* vol.79, no.4,

In the United States, the existence of such an understanding is apparent shortly (although not immediately) after the Indian test. The first hearings, for example, tended to express a general desire for what one Senator deemed, "a thorough review of the [export] standards."[66] It was becoming accepted that "only cooperation among the nuclear exporters of the industrial world can help to slow the spread of nuclear weapons capabilities to many most nations."[67] However, the precise nature and extent of such a review (whether purely domestic or even international) remained vague, and took a back seat to the broader expressions of concern about the precedent set by India and the general angst over past American export policies. It was not long, however, before a belief appeared to be growing that "maintaining and refurbishing the international regime would require a general approach around which a broad group of nations could rally."[68]

While the Congressional fretting which immediately followed the Indian test focused mostly on the danger to the credibility of the regime and the United States's leadership responsibility, the Ford Administration – after a five month delay – began to display its conviction that it had alighted upon solutions. At the bequest of Kissinger, the US ACDA and State Department had begun to formulate plans for a multilateral agreement on export controls. The creation of this approach to the problems of export controls was hardly surprising. The American near-monopoly in the supply of enriched uranium to European reactors provided the kind of leverage which would render such a solution workable. In the recollection of one delegate, between October and December 1974, the US

February 1977, p.60.

[66] *Exports of Nuclear Materials and Technology*, p.24 (speaker: Senator Henry M. Jackson).

[67] Steven J. Baker, "Monopoly or Cartel," *Foreign Policy*, no.23, Summer 1976, p.204.

and Soviet Union began "confidential consultations concerning possible steps to be taken by nuclear suppliers to tighten sensitive export controls."[69] A similar discussion between the UK and USSR on the need for a suppliers' agreement came several months later, demonstrating that the American conviction that the solutions lay in a multilateral export agreement was also shared by these two states.

The problems which the American Congress had identified as a consequence of the Indian test were understood, by the nuclear weapons states of the NPT, to have a specific solution: the establishment of guidelines of nuclear supply. There existed a belief – even before anything had been done – that something *could* be done. The idea that this something was a multilateral overhaul of nuclear supply standards is evident in more than simply the actions of the actors involved. In a UN address prior to the US-USSR meeting, Kissinger declared, for example, his determination that it was current nuclear supply policy which "cannot continue if it leads to the proliferation of nuclear explosives."[70] He continued to express such a conviction a year later, asserting that "it is crucial that suppliers and user nations agree on firm and clear export conditions...the priority now is to strengthen the safeguards on the export of nuclear materials for peaceful purposes."[71] An article in *Foreign Affairs* supported this, suggesting that "the

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[68] Nye, "Sustaining Non-proliferation in the 1980's," p.101.

[69] Timerbaev, *The Nuclear Suppliers Group,* p.24.

[70] "An Age of Interdependence: Common Disaster or Community?" Address by Henry Kissinger before the 29th UN General Assembly, September 23rd, 1974, reprinted in *Peaceful Nuclear Exports,* p.815.

[71] Secretary of State Henry Kissinger, Address to the Wisconsin Institute of World Affairs, Milwaukee, Wis., July 14, 1975, quoted in Michael J. Brenner, *Nuclear Power and Non-Proliferation,* p.94.

aftermath of the Indian detonation is thus clearly a good time for a meeting of minds among all potential suppliers."[72]

The need for such an agreement was, not surprisingly, underscored by the 1975 nuclear supply deals between France/Pakistan and West Germany/Brazil. Such an event confirmed the fact that a unilateral overhaul of supply standards would be ineffective. The West German deal, as one American Senator worriedly noted, marked "the first time that any nation capable of supplying nuclear materials has agreed to provide another nation with a complete fuel cycle."[73] The initial identification of the need for a multilateral suppliers' agreement was thus borne of the inescapable fact that other suppliers were greatly increasing their share of the market. Indeed, it was even argued within the US that unilateral action would be not merely ineffective but self-defeating. The Deputy Secretary of the Department of the Defense, for example, claimed that "if we pull back, then we leave a vacuum for other countries to move in, in a commercial nature, and the risks that are associated with this could be high."[74]

The existence of such a belief in the United States is substantiated by the continued Congressional and State Department support for, and determination to achieve, the aims and goal of the supplier meetings in London, despite the vociferous resistance to them by France and West Germany. The possibility of another strategy by which to prevent proliferation remained unexplored. Rather, it was consistently vowed that "there has to be an understanding between us and

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[72] Quester, "Can Proliferation Now Be Stopped?", p.94.

[73] Ribicoff, "A Market Sharing Approach to the World Nuclear Sales Problem," p.763.

[74] *Exports of Nuclear Materials and Technology,* July 12 & 15, 1974, p.85 (speaker: Dr. James P. Wade, Deputy Secretary of the Department of Defense).

the other suppliers of nuclear technology."[75] Testimony on behalf of the Department of State similarly affirmed the belief that

> the goal of non-proliferation can be more effectively realized if suppliers adopt certain restraints...undertaking to supply nuclear materials and equipment only under safeguards.[76]

The determination that this was the solution was shared by both Presidents Ford and Carter. Ford, in his 1976 nuclear policy statement, continued to proclaim that "action to control proliferation must be an international cooperative effort...[and that]...Common standards must be developed and accepted by all parties."[77] Carter, meanwhile, stated his desire that the more reticent nuclear suppliers "join us...in trying to have some worldwide understanding of the extreme threat of the further proliferation of nuclear explosive capability."[78]

It is clear then, that a formal agreement between nuclear suppliers was considered by the United States as being the answer to the problems that had been raised. This conviction showed no evidence of wavering, even in the face of strident French and West German objections. In addition, the American belief in the need for a suppliers' agreement was apparently held by the other two NWS: the USSR and the UK. As was detailed previously, other participants in the

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[75] *Office of Technology and Assessment Report on Nuclear Proliferation Safeguards,* hearing before the Subcommittee on Energy, Nuclear Proliferation, and Federal Services of the Committee on Governmental Affairs, United States Senate, ninety-fifth Congress, first session, 4 April 1977, p.22 (speaker: Senator John Glenn).

[76] *Nonproliferation Issues,* p.167 (speaker: Myron B. Kratzer, Acting Assistant Secretary, Bureau of Oceans and International Environmental and Scientific Affairs, Department of State).

[77] *Nuclear Policy Statement by President Gerald R. Ford,* 28 October 1976, in *Public Papers of the Presidents of the United States: Gerald R. Ford,* p.2764.

[78] *Remarks by President Jimmy Carter on nuclear power,* April 7, 1977 reprinted in Brenner, *Nuclear Power and Non-Proliferation,* Appendix E, p.283. As noted earlier, Carter had based much of his Administration's nuclear policy on the findings of the Ford/MITRE study which, not surprisingly, had likewise concluded that "US nuclear power policies and programs can be shaped to support such a strategy, but they can be only partially effective unless they are meshed with

suppliers meeting became willing to go along with the idea of a formal suppliers agreement, although one which was less extensive than the Americans had initially envisioned. Nonetheless, the belief existed – on the part of the initiator of such change – that the problems raised had specific solutions which were, in turn, supported by the USSR, UK and others, and eventually accepted by France and West Germany. This then further assists in an understanding of why the shock of the Indian test was followed by rapid regime change: the belief that such change was possible.

Conclusions:

The previous chapter's narrative of events, it will be remembered, was helpful in providing insight into the relationship between regime change and regime theory. Such a narrative also hinted at ways by which the occurrence of such change following the shock may be understood. These hints now appear to be borne out by an examination of how the shock was apparently understood, particularly within the United States. Specifically, four interpretations of the Indian test paved the way both for regime change to occur and to occur at the pace that it did. These variables – the understandings of danger, responsibility, immediacy and solvability – were implied in the narrative of the changes to the regime which occurred between 1974 and 1978 and were supported by the language of those who instigated such change.

There is evidence that the Indian test was viewed as having set a dangerous precedent which, if imitated, would necessarily destabilise the nonproliferation regime. Such an interpretation was suggested by the previous

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political actions and with broader arrangements." (See *Nuclear Power: Issues and Choices*,

narrative which, in demonstrating that such change was not simply unilateral but occurred in the context of the regime, hinted at a perceived need not merely to penalize India but to dissuade others. Furthermore, the persistence of American leadership in the post-1974 nonproliferation efforts implied an acceptance of responsibility for doing so – an indication which was again borne out by the frequent expressions of a willingness to lead the necessary changes to the regime. The speed at which the regime change occurred also suggested a belief that such change was both of immediate concern and required immediate action. This 'understanding of immediacy' was supported by the evidence that no other interests were seen to take precedence over nuclear nonproliferation and the apparent belief that action was required before time "ran out." Finally, the occurrence and speed of regime change also hinted at a conviction that solutions to the problems raised had been or could be found. While these interpretations of the Indian test are not final word on the matter, they do assist an understanding of why the shock of 1974 was followed by what was previously demonstrated to have been the successful negotiations for rapid regime change. Whether the variables suggested by the narrative of the Indian test are of use in understanding the outcome in other cases, however, remains to be seen.

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p.297).

Chapter 4: The 1981 Bombing of Osiraq – A Case of Regime Change?

In spite of the significant changes to the nuclear nonproliferation regime following the Indian nuclear test of 1974, it was a mere seven years after this shock to the regime that the next occurred. This time, however, the locus of the event in question was not South Asia, but the Middle East. Moreover, the shock in question was as interpreted less an act of proliferation than an act of counterproliferation against suspected proliferation.

This event was the Israeli bombing of an Iraqi reactor on the seventh of June, 1981. The surprise attack on the Osiraq research reactor stood as the first successful attempt at this kind of counterproliferation.[1] Not surprisingly, it was credited with having "shattered the world's atomic agenda."[2] After the changes to the regime which had characterised the second half of the 1970's, the raid on Osiraq challenged not only the goals of the nonproliferation regime, but the very purpose of the regime itself. In the words of one American Senator, "no event since India's explosion of a nuclear device in 1974 has underscored so dramatically the dangers of nuclear proliferation."[3]

Superficially, such an assessment appears to be true. The act itself, and the immediate international reaction to it, indicated that the shock did indeed challenge the expectations regarding nuclear proliferation and the course of the nonproliferation regime. It did so by offering up unilateral counterproliferation as a better way than a

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[1] There had been, in September 1980, an unsuccessful attempt by Iran to destroy the same reactor.

[2] Bennett Ramberg, "Attacks on Nuclear Reactors: Implications of Israel's Strike on Osiraq," *Political Science Quarterly,* vol.97, no.4 ,Winter 1982-83, p.653.

[3] *The Israeli Air Strike,* Hearings before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, first session on The Israeli Air Strike and Related Issues, June 18, 19, and 25, 1981, p.11 (speaker: Senator John Glenn).

regime by which to ensure nonproliferation. The purpose of the following discussion is to narrate the years immediately before and immediately following the shock. Such an analysis will then allow conclusions to be drawn regarding relationship between this shock and the understanding of regime change in the context of regime theory. This case will show that, in contrast to the Indian test, shocks do not necessarily result in regime change.

As before, the investigation of the Osiraq shock in this context will contain a brief summary of the years immediately before the event, and a précis of the event itself. The discussion of the outcome of the shock will examine the initial reaction to the shock and then the years following this reaction to assess the change to the regime that did, or indeed did not, occur.

Regime and Nuclear Context Prior to the Shock:

The years which preceded the Israeli bombing of Osiraq did not see a continuation of the trends – either globally or in the context of the regime – which had surfaced during the few years following the Indian test. The 1970's, for example, had been characterised by a relative thaw in Cold War relations and a reprioritisation of the nuclear nonproliferation regime near the forefront of American concerns.

However, shortly after the publication of the NSG in 1978 things began to go wrong. Globally, the détente in American-Soviet relations faded following the election of Ronald Reagan to the American Presidency in 1980. Following the American humiliation over the 1979 siege of the US embassy in Iran, the election campaign of 1980 saw the hawkish Reagan Republicans winning by a landslide. This Administration then took office with what has been described as "a distinctly

jaundiced view of Soviet behaviour and intentions."[4] The Soviet invasion of Afghanistan did little to endear the USSR to an President who famously viewed it as an "evil empire." Immediately prior to the Israeli attack on Osiraq, then, the niceties of a nuclear nonproliferation regime took a back seat to the renewed tensions between – and a build-up of nuclear capabilities within – the United States and USSR. The year of the election was fairly described in an annual survey as having "represented the lowest point in Soviet-American relations in over a decade."[5]

Renewed superpower hostilities did not bode well for the nuclear nonproliferation regime. The American enthusiasm which had been instrumental in leading the changes of the 1970's was replaced by a comparative disregard of the regime and its goals. Indeed, and in contrast to the centrality of nonproliferation issues in the 1976 election campaigns, the Reagan Administration had no official nonproliferation policy for the first eight months of its term. When it was eventually articulated (shortly after the Osiraq bombing), the President's statement on the subject declared that while nonproliferation efforts were vital, "we must reestablish this Nation as a predictable and reliable partner for peaceful nuclear cooperation under adequate safeguards."[6] The Administration also declared nuclear testing indispensable, thus undermining hopes of a CTBT. The trends in policy against nuclear proliferation – specifically against reprocessing and enrichment technology – which had prevailed under both the Ford and Carter administrations, were clearly at

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[4] *Strategic Survey 1981-1982,* (London: International Institute for Strategic Studies; 1982), p.29.

[5] Ibid., p.29.

[6] "Statement on United States Nuclear Nonproliferation Policy," July 16th, 1981 in *Public Papers of the Presidents of the United States – Ronald Reagan, 1981; January 20th to December 31st 1981* (Washington, D.C.: Government Printing Office; 1982), p.630.

an end. This occurred despite ominous warnings in a contemporary survey that "in 1980 the prospects for nuclear proliferation worsened."[7]

It is unfair, however, to lay the blame for such a change exclusively at the feet of the new Administration. The optimism with which INFCE had been established, for example, had resulted in little real progress. Instead, it was observed, "the mood at the conference was rather sober and sceptical."[8] The conception of the NSG as a cartel of First World nations seeking to deny Third World advancement had "attracted sharp criticism from many developing countries,"[9] and this had not been assuaged by the time of the 1980 NPT Review Conference. Moreover, disputes between NWS and NNWS over the negotiation of a comprehensive test-ban treaty pervaded the gathering. The failure of the Conference to agree upon a final document came about, it is generally agreed, "partly as a result of assertions that the superpowers had abandoned any serious commitment to restraints on their own actions as implied in Article VI."[10] The absence of such a document was indicative of the state of the disillusionment with the regime generally. It was observed at the time that "diplomatically, then, the Second NPT Review Conference failed in a way that may damage the credibility of the Treaty."[11]

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[7] *Strategic Survey 1980-1981* (London: The International Institute for Strategic Studies; 1981), p. 111.

[8] Theodor Winkler, "Nuclear Proliferation in the 1980's," in *Nuclear Proliferation in the 1980's: Perspectives and Proposals*, William H. Kincade (ed.), (London and Basingstoke: The MacMillan Press, Ltd.; 1982), p.152.

[9] Fischer, *History of the IAEA*, p.101.

[10] Anthony G. McGrew "Introduction: Nuclear Non-Proliferation at the Crossroads?" in Simpson and McGrew (eds.) *The International Nuclear Non-Proliferation System*, p.5. Article VI, of course, obliges each of the Parties to the Treaty to undertake "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament..." David Fischer also noted that "the non-nuclear-weapon States pressed for the prompt negotiation of a comprehensive test ban treaty; the USA and the United Kingdom resisted, and the opposition of two out of three nuclear weapon States then party to the NPT amounted, in effect, to a veto." (*History of the IAEA*, p.101). As a consequence of this impasse, he notes, the conference ended without a final declaration.

Much as in the years immediately before the Indian test, the nonproliferation regime immediately pre-Osiraq was dormant. Nuclear nonproliferation and international regimes had once again receded from the centre of international concern. The United States retreated from the proactive role that it had adopted in the latter half of the 1970's. However, while each shock was preceded by dormancy in the regime, this dormancy was far from identical. As was discussed previously, the inertia of the years previous to the Indian test was accompanied by a sense of complacency over the fact that the regime had been created and would be successful. The sentiments regarding the regime in the years prior to the Osiraq bombing, however, did not reflect any sense of satisfaction. Rather, the relegation of nuclear nonproliferation concerns was a consequence of changed international circumstances which focused US and Soviet attention on other matters.

The Shock:

Iraq's nuclear programme had formally begun in 1959 with the establishment of the Iraqi Nuclear Energy Committee. It joined the IAEA in the same year and, a decade later joined and ratified the NPT as a non-nuclear weapon state. At the time of its entry into the NPT, Iraq's nuclear programme comprised a research reactor from the USSR, which had begun construction in 1963 at Tuwaitha. This partnership, however, was destined to be neither long nor harmonious and ended following the Soviet completion of a thermal power reactor in 1968. Shortly thereafter, Iraq turned to France for assistance and, in 1974, the two states entered into an agreement which

[11] *Strategic Survey 1980-1981*, (London: The International Institute for Strategic Studies; 1981), p.114.

saw France undertake to build two research reactors (Osiraq – or Osirak – and Isis, later renamed Tammuz I and II respectively).[12]

The Osiraq reactor, however, was not fated to operate. Instead, on June 7th, 1981, before radioactive material had been introduced into the reactor, it was attacked and destroyed by Israeli jets.[13] Codenamed Operation Babylon by the Israelis, the raid involved fourteen planes in all: eight American-supplied F-16's and six American-supplied F-15's (a fact which was later to cost Israel a delay in future F-16 shipments from the United States). Nonetheless, the attack was entirely successful. It was later reported that the bombing was so accurate that "none of the buildings around the reactor had even been damaged."[14] The same could not be said of all the human beings in the area. One French technician on the ground died in the raid. The Israeli Air Force planes returned safely to their base at Etzion having utterly destroyed the near-completed reactor as Israel prepared to face the international reaction.

Initial International Reactions:

The Israeli PR effort began in earnest as soon as the Israeli Air Force arrived back at their base. The day after the attack, a letter was given to the President of the UN Security Council outlining Israel's reasons for carrying out the attack, the grounds

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[12] For a good overview of the Iraqi programme from its inception to 1984, see Leonard S. Spector, *Nuclear Proliferation Today,* pp.165-191.

[13] This was not the first trouble which the reactor had encountered. The programme of which it was a part had been the target of two acts of sabotage. Firstly, in April, of 1979 saboteurs destroyed the reactor when it was in La Seyne Sur Mer (near Toulon), awaiting shipment. Then, in July of 1980, the head of the Iraqi atomic energy agency, Yahia el Mesnad, was murdered. Finally, in September of 1980, a (suspected) Iranian raid on the reactor caused minor damage. (See Jed C. Synder "The Road to Osiraq: Baghdad's Quest for the Bomb," *The Middle East Journal,* Autumn 1983, pp.579-581. Also see Amos Perlmutter, Michael Handel and Uri Bar-Joseph *Two Minutes Over Baghdad,* (London: Corgi Books; 1982) and Fischer, *History of the IAEA* p.104. Fischer notes that "it was widely believed that Israeli agents were responsible for blowing up the core of the reactor while it was still in Toulon, awaiting shipment to Iraq, and might have been responsible for the death in Paris of one of the engineers in charge of the project.")

[14] *The Daily Telegraph,* 14 June 1981.

being that Iraq was using its non-nuclear membership of the NPT as a cover for a weapons programme. This charge was reiterated later in the year in an Israeli Government publication which expanded further on the reasons behind the attack.[15]

Predictably, the Arab nations – Iraq in particular – were incensed by the attack and its outcome. Iraq, obviously, had lost its research reactor. However, the anger evident in the reaction of the other Arab states was motivated less by any deep-seated affection for Iraq than by embarrassment at the ease of the Israeli success. Saudi Arabia and Jordan (through whose air space the Israeli pilots had flown) had lost considerable face. Egypt, for its part, was annoyed that the raid had been carried out only days after a meeting between President Sadat and Prime Minister Begin.[16] An emergency meeting of the Arab League Council on June 11th in Baghdad thus concluded with a resolution calling upon the UN to impose sanctions on Israel.

Ultimately, the Arab states' reaction is of little importance in understanding the eventual outcome of the shock in the context of the nonproliferation regime. As in the case of the Indian test, an examination of the event in the context of the regime requires examination of the reactions of those in the regime most challenged by the shock. This includes the major actors in the regime (the United States and USSR) and the relevant suppliers (in this case, France). In addition, Israel had justified its attack as necessary in the face of inadequate safeguards, making reference to its unwillingness to entrust its

> fundamental security to an inspection procedure which in contractually limited, is not unconditional and binding, and

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[15] *The Iraqi Nuclear Threat: Why Israel Had to Act,* (Jerusalem: Government of Israel; 1981). The report discussed the Iraqi attitude towards Israel, the nuclear threat it posed and the inadequacy of the safeguards as they had been applied to the reactor. It also discussed the legality of the attack and the possibility of a Nuclear Weapons-Free Zone (NWFZ) in the Middle East.

[16] It should be remembered, however, that enemies of Iraq such as Egypt and Syria, despite their official protestations, were likely to have been secretly pleased that Iraq's nuclear capability – such as it was – had been destroyed.

> is substantially dependent in both character and duration
> on the discretion of the country posing that threat.[17]

The bombing of Osiraq, therefore, raised questions regarding the effectiveness of the IAEA and the reactions of that body – specifically, the bureaucracy of that body – also require investigation.

The Soviet Union

As the reaction to the Indian test indicated, the question of horizontal nuclear nonproliferation was one of the few areas in which the USSR and US were in general agreement. Neither superpower had any special desire to see nuclear weapons spread, particularly to unstable regions such as the Middle East in which both states had interests.[18] Consequently, the destruction of the Iraqi reactor was unlikely to have met with genuine regret. As a Congressional Research Paper noted shortly after the raid, any nuclear proliferation in the Middle East carried with it Cold War overtones, and "a nuclear armed Iraq acting irresponsibly might...have been perceived as a Soviet client."[19]

This did not mean that the USSR approved of Israel's action, either officially or unofficially. Ustinov declared to his cabinet that "the Israelis completely abandoned all restraint – they're already falling on our allies. It time to teach them a

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[17] *The Iraqi Nuclear Threat – Why Israel Had to Act,* p.2.

[18] It was reported, for example, that Khrushchev had said of Iraq's request for nuclear assistance: "First the Chinese, and now the Arabs are asking for the bomb. And it's going to be a headache for us in the end. Co-operate [with them] but do not give them bombs." (See Олег Гриневский, *Атомная бомба и ближний восток* (Oleg Grinevsky, "The Atomic Bomb and the Middle East"), at www.world.ng.ru/azimuth/2001-03-01/6_bomb.html. The Russian text states: "Когда докладывали Хрущеву тот хмыкнул и сказал: Сначала китайцы, а теперь вот и арабы бомбу просят. А голова в конечном счете у нас болеть будет. Сотрудничать – сотрудничайте, но бомбы не давать!"

[19] Warren Donnelly "The Israeli Raid Into Iraq," (a brief report made by the Congressional Research Service of the Library of Congress, Foreign Affairs and National Defence Division) reprinted in "The Israeli Air Strike", p.72.

lesson, or else Syria will be next."[20] Nor were the Soviets slow to recognise a potential propaganda coup when one was presented. Israel's raid provided a convenient and easy means by which to attack the United States. Official condemnation of Israel thus became more of a means by which to segue into a diatribe against American expansionism. The first Tass report on the incident, for example, "actually devoted more space to allegations of US complicity than to denunciation of the Israeli raid."[21] A statement by a group of socialist states before the UN Disarmament Committee referred to "Israel's criminal attack,"[22] and also declared that "it is necessary to take all appropriate measures to ensure that similar acts will not be repeated in the future."[23]

France

As the supplier of both the reactor and the fuel to be used, France found itself entangled in the Israeli raid on Osiraq. Israel's assertion that the reactor and its fuel were amenable to nuclear weapons production put the stringency of France's nuclear export standards under the international spotlight for the second time. Having been chastised following the Indian test for its nuclear dealings, the French government was less than pleased to have its export criteria examined once again, particularly when Israel's actions had cost the life of a French worker.

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[20] Oleg Grinevsky, "The Atomic Bomb and the Middle East," (The Russian text cites Ustinov as stating: "Совсем распоясались эти израильтяне – уже на наших союзников нападают. Пора им укорот давать, а то следующей будет Сирия.")

[21] Warren Donnelly, "The Israeli Raid into Iraq," p.72.

[22] "Statement on Behalf of a Group of Socialist States by the GDR Representative (Herder) to the Committee on Disarmament: Israeli Attack on Iraqi Nuclear Facility [Extract], June 18, 1981," in *Documents on Disarmament 1981* (Washington, D.C.: US Arms Control and Disarmament Agency; 1982), p.227.

[23] Ibid., p.227.

However, the French reaction to the shock "fluctuated between loud indignation and a more moderate tone which included declarations of friendship towards Israel."[24] Despite this, France continued to insist that its nuclear export standards were in no way lacking. A French source was quoted in one journal as declaring that, contrary to the Israeli allegations, "this reactor is extremely poorly adapted to the regular production of plutonium."[25]

The French Foreign Minister, Claude Cheysson, immediately summoned the Israeli Ambassador in Paris and "protested angrily at the raid."[26] The Prime Minister, Pierre Mauroy, declared that the raid was "an unacceptable and very serious event which the French government condemns."[27] M. Mauroy also pointed out, in the face of Israeli criticism of French export standards, that the reactor was under IAEA safeguards.[28] In spite of the generally pro-Israeli sentiments of the new French President François Mitterrand, the French government nonetheless asked the UN Security Council to condemn Israel for its action.[29] The determination by France, – that "it would not push protests to the point of straining relations [between itself and Israel]"[30] – did not, however, change the fact that the attack on the reactor once again focused unwelcome attention on French nuclear trade standards.

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[24] Shlomo Nakdimon, *First Strike,* (New York: Summit Books; 1987), p.293.

[25] *Nucleonics Week,* vol.22, no.23, 11 June 1981, p.2. The Israelis did themselves no favours when, hours after the attack, Prime Minister Begin asserted that there was a secret bomb factory which he identified as being first 130, then 13 metres beneath the reactor. This assertion was roundly discredited. (See Eliot Marshall "Fallout from the Raid on Iraq," *Science*, vol.213, 3 July 1981, p.120.)

[26] *The Daily Telegraph,* 10 June 1981.

[27] *Le Monde,* 9 June 1981 (M. Mauroy stated that the raid was "une act inacceptable et très grave que le gouvernement français condamne.")

[28] Ibid., (M. Mauroy said: "je voudrais insister sur le fait qu-il s'agit d'un centre de recherches soumis au contrôle de a'Agences international pour l'énergie atomique.")

[29] *Nucleonics Week,* vol.22, no.24, 18 June 1981, p.3.

[30] *The Washington Post,* 11 June 1981, p. A29.

The United States

It was observed, some years after the Osiraq shock, that "the US seems to have been genuinely surprised by the raid, and not only by its timing."[31] This, combined with Soviet accusations of American complicity in the raid may partly explain the vehemence of the American reaction. Given that the Reagan Administration was "widely considered to by the most pro-Israeli since 1948,"[32] the initial reaction by the United States government to news of the Israeli action was one of disappointment and frustration.

The attack on Osiraq had thrown American peace initiatives in the Middle East into disarray. Consequently, the official State Department reaction to the raid consisted of a declaration that the American government "condemns the reported Israeli air strike...the unprecedented nature of which cannot but seriously add to the already tense situation in the area."[33] On the tenth of June, the decision was made to suspend a shipment of F-16 jets from the US to Israel. The previous use of US-supplied aircraft by Israel in the attack raised questions about Israel's adherence to a 1952 commitment to use such equipment for defensive purposes only. A letter from the Secretary of State to the American Congress on the same date stated, "on behalf of the President, that a substantial violation of the 1952 Agreement may have occurred."[34]

The initial reaction by the Administration, then, was more vigorous than perhaps may have been expected. This did not mean that the Reagan Administration

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[31] Paul F. Power, "The Baghdad raid: retrospect and prospect," *Third World Quarterly*, vol. 8, no.3, July 1986, p.854.

[32] *The Observer*, 12 June 1981.

[33] "Statement by the Department of State: Israeli Attack on Iraqi Nuclear Facility," June 8th, 1981, Department of State Bulletin, August 1981 (reprinted in *Documents on Disarmament, 1981*, p.212).

was abandoning what it saw as its commitments to Israel. However, in light of the Middle East peace initiatives, there was a need to convince the Arab states that the US "did not accept indulgently everything that Israel undertook."[35] This did not, however, portend a realignment of American policy in this area. Writing in his diary immediately after the attack, President Reagan noted that "we are not turning on Israel. That would be an invitation for the Arabs to attack."[36] While the Administration felt entitled to express its frustration with – in the words of the Under Secretary for Political Affairs – "the damage which has been done to the search for peace in the Middle East"[37], this was tempered by an underlying support for the state of Israel, if not its actions. The suspension of the delivery of aircraft lasted until August – a bare two months.[38]

As in the case of the Indian shock, the disinterest of the presiding Administration in the implications of the shock for the nonproliferation regime was countered by a flurry of activity in Congress. Following the Osiraq bombing, a series of hearings on the subject were once again held. However, instead of focusing exclusively – like the Administration and State Department – on the meaning of the raid in terms of the Middle East peace process, these hearings emphasized the

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[34] "Letter from Secretary of State Haig to the Congress: Israeli Attack on the Iraqi Nuclear Facility," June 10th, 1981, reprinted in *Documents on Disarmament 1981*, p.215.

[35] Amos Perlmutter "The Israeli Raid on Iraq: A New Proliferation Landscape," *Strategic Review*, Winter 1982, p.41.

[36] Ronald Reagan, *Ronald Reagan: An American Life*, (London: Hutchison; 1990), p.413.

[37] "Israeli Attack on Iraqi Nuclear Facilities" Hearings before the Subcommittees on International Security and Scientific Affairs on Europe and the Middle East and on International Economic Policy and Trade of the Committee of Foreign Affairs, House of Representatives, Ninety-seventh Congress, first session, June 17 and 25, 1981, p.5 (speaker: Ambassador Walter J. Stoessel, Jr., Under Secretary for Political Affairs, Department of State).

[38] The suspension is unlikely to have lasted even that long had Israel not used American-built planes to attack the PLO in Beirut, killing 300 civilians and again raising the question of a violation of the 1952 agreement and prompting the suspension to be extended.

challenges the event raised for the nonproliferation regime itself, specifically the effectiveness of IAEA safeguards.

Israel had partially justified its attack on the reactor on the grounds that IAEA safeguards were ineffective at preventing or discovering attempts by Iraq to divert fuel for weapons. These accusations were not lost on Congress, and the IAEA was subjected to prolonged and vehement criticism. Hearings in both the Senate and the House of Representatives evidenced an increasing unease not only with the prospects for peace in the Middle East, but with the ability of IAEA safeguards to detect any attempted diversion of fuel by Iraq or any other state with nuclear weapons ambitions.[39]

This dim view of the abilities of the IAEA was clear from the outset of the hearings. It was asserted, for example, that "there is presently no basis for public confidence in IAEA safeguards."[40] However, the event which did most to cement Congressional concerns over IAEA effectiveness came courtesy of the testimony of a former IAEA inspector before both the Senate and the House of Representatives. In the course of this testimony, the inspector in question, Roger Richter, stated not only that Iraq aspired to building nuclear weapons, but that the safeguards designed to prevent such an eventuality were utterly inadequate. Speaking of the Osiraq reactor in particular, Richter maintained that "the IAEA is incapable of safeguarding a facility of this type under the present safeguards system."[41] This had the predictable effect of galvanizing the members into calling for the Administration to effect a strengthening

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[39] See *The Israeli Air Strike,* (Senate hearings, June 18, 19, and 25, 1981) and *Israeli Attack on Iraqi Nuclear Facilities* (House of Representative hearings, June 17 and 25, 1981).

[40] *The Israeli Air Strike,* p.21 (speaker: Senator Cranston). This assertion met with the agreement of Senator Boschwitz, who stated that "the nuclear safeguards, as Senator Cranston and others have pointed out, are apparently inadequate in the minds of many, including the Israelis." (Ibid., p.24.)

[41] Ibid., p.129.

of the regime by reforming IAEA safeguards or even reconvening the Nuclear Suppliers Group.[42] This proposal was destined to be rejected a month after the attack. It was reported at the end of July that "Reagan will not seek to reconvene the so-called 'London Suppliers Club'...or form a new group of nuclear suppliers to negotiate stronger nonproliferation policies."[43] In keeping with the recently articulated official policy to "reestablish this Nation as a predictable and reliable partner for peaceful nuclear cooperation,"[44] such opposition was perhaps unsurprising.

Such a refusal stood as one of many initial indications that the views of the Administration and State Department were different to those which held sway in Congress. While the primary reaction of the Administration appears to have been a concern with the implications of the raid on the prospects for the Middle East peace process, Congressional hearings focused heavily on the inadequacy of IAEA safeguards as attested to by witnesses such as Roger Richter. The Administration, on the other hand, dismissed Richter's claims entirely, stating that "Mr. Richter presents no specific facts to support his claim" and that "from our perspective, Mr. Richter's testimony sheds no additional specific light on this question [of Iraqi intentions]."[45]

The differing initial reaction to a shock within the American government was not without precedent. It will be remembered that Congressional concerns following

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[42] Senator John Glenn, the participant who was perhaps the most vocal in calling for the nonproliferation regime to be strengthened in the wake of the Israeli attack, declared his intention to send a letter to the President requesting that the NSG be reconvened (see *The Israeli Air Strike,* p.177).

[43] *Nucleonics Week,* vol.22, no.30, 30 July 1981, p.3.

[44] "Statement on United States Nuclear Nonproliferation Policy, July 16, 1981," in *Public Papers of the Presidents of the United States: Jan.20th to Dec. 31st 1981*, p.630. *The Wall Street Journal*, in writing of Reagan's statement, described it as one which "attempts to reconcile his goals of opposing the spread of nuclear weapons and promoting the use of nuclear power" (17 July 1981).

[45] "Administration Comments on the Safeguards of the International Atomic Energy Agency on the Iraqi Nuclear Facility," June 25th, 1981. Reprinted in *Documents on Disarmament 1981*, p.245.

the Indian test in 1974 had likewise differed sharply from the disinterest of an administration which did not initially view the event as significant. Following the Osiraq bombing, this divergence manifested not, this time, over *whether* the shock had significance, but in what way.

The IAEA

In light of the Israeli accusations of IAEA incompetence, the Director-General and the Board of Governors not surprisingly "interpreted the attack as an assault on IAEA safeguards."[46] It was, after all, the competence of that organization which was explicitly challenged by the bombing of the Iraqi reactor. This conviction – that the IAEA had been attacked along with Osiraq – was first expressed by IAEA Director-General Sigvard Eklund in an address to the Board of Governors two days after the attack, on the ninth of June.[47] Shortly thereafter, the Board of Governors passed a resolution which reasserted confidence in the IAEA safeguards system. Nonetheless, Dr. Eklund felt it necessary to restate the Agency's perception of having been undermined when he claimed, in an address to the UN Security Council, that "from a point of principle, one can only conclude that it is the Agency's safeguards system which has also been attacked."[48]

Such expressions of anger and concern within the IAEA evidenced its own feelings of having been threatened by Israel's actions. Predictably, such sentiments

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[46] Fischer, *History of the IAEA,* p.104. The Board of Governors holds the executive power of the IAEA, and has the authority to carry out the functions of the Agency. This means that the Board exercises "exclusive power in most safeguards matters:...[it may] draw up and approve safeguards systems, appoint inspectors, approve safeguards agreements and, if doubts arose about the nuclear activities of a State in the context of IAEA safeguards, the Board would judge whether a State was complying with its safeguards obligations" (see Fischer, *History of the IAEA,* p.37). It is therefore possible, in this sense, to speak of an "IAEA reaction" to the shock.

[47] "Peaceful Nuclear Development Must Continue," *IAEA Bulletin,* vol.23, no.3, (1981).

deepened with the testimony of Roger Richter before both the American Senate and House of Representatives. In response to Richter's assertions that the IAEA was, as Israel had charged, incapable of adequately safeguarding Osiraq, the Director-General informed the Board that all possible diversion scenarios had been accounted for and that "there was thus nothing wrong with the safeguards being applied on the Tamuz reactors nor any deficiencies in the inspection schedule or procedures."[49] Israel had, in fact, acted only *in anticipation* of a failure of IAEA safeguards. Nothing, however, had happened which demonstrated that safeguards would indeed fail in Iraq. This kind of defensiveness found few critics within the organization.

The Outcome of the Shock:

The years which followed the Israeli attack on Osiraq reverberated with the aftershocks of the raid. The destruction of the safeguarded reactor of an NPT member by a non-NPT state was extensively discussed, and the issue surfaced repeatedly in the United Nations and the IAEA. In this sense, an internationalisation of the shock occurred which resembled that which had followed India. This was not laid to rest until the 1985 NPT Review Conference. However, this was the only respect in which the effects of the Indian test were echoed by the Osiraq case. A chronological survey of the period of time between the initial reactions to the shock and the Third Review Conference in 1985 reveals no evidence of the kind of extensive and rapid regime development which occurred in the wake of the Indian test.

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[48] Address to the UN Security Council meeting, 19 June 1981, by Director-General Eklund, reprinted in "Peaceful Nuclear development must continue," p.4-5.

[49] Ibid., p.6.

September 1981 – August 1982

Insofar as the nonproliferation regime was concerned, the year which began with the IAEA General Conference of September 1981 was one which was to prove remarkable for all the wrong reasons. Rather than the reactions bringing a growing consensus and a determination to bring about change, the year was characterized by a further deepening of the divisions which had appeared immediately following the raid.

These divisions were not simply international. The United States, which had been so instrumental in galvanising multilateral action and regime change in the 1970's found itself unable to bridge the gap between the concerns held by the Administration and State Department and those held by Congress. There was an over-riding concern in Congress with the fact that "Israel did not [have] confidence in IAEA safeguards."[50] As the preceding discussion revealed, the Israeli action prompted disquiet in the Administration over the future of the peace process and in Congress over the efficacy of IAEA safeguards.

The year which followed did little to bring these concerns together. If anything, Congressional attacks on the IAEA's safeguarding ability were stepped up, much to the distaste and frustration of the State Department. In Senate hearings of December 1981, anti-IAEA sentiment was increased by a letter from the chairman of the Nuclear Regulatory Commission (NRC), Nunzio J. Palladino, which declared that the "NRC is concerned that the IAEA safeguards system would not detect diversion in at least some types of facilities."[51] Palladino's letter went on to say that "in addition, we are not confident that the member states would be notified of a diversion in a

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[50] A.B. Lovins, "Iraq Nuclear Intentions," *Bulletin of the Atomic Scientists,* vol.42, no.8, 1986, p.55.

[51] *IAEA Programs of Safeguards,* Hearings before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, first session, December 2nd, 1981, p.2.

timely fashion."[52] This letter, which was held aloft at the beginning of the hearings, was received as still more evidence that the State Department – which had disparaged the testimony of Roger Richter – had been defending the indefensible. One Senator spoke darkly of the "State Department's reflexive desire to classify and hold any information which raises questions about the IAEA system."[53] Certainly, unremitting Congressional attacks on the IAEA were irksome both to the State Department and to the Administration which, in the recollections of one former State Department official, "did not want the US Congress to take actions that would have damaged the IAEA safeguards system, and hence did what it could to defend the efficacy of safeguards."[54]

Congress, however, appeared once again to have the bit between its collective teeth with regards to this aspect of the nonproliferation regime. Yet another ex-IAEA inspector was duly produced to testify to the inadequacy of safeguards. This former inspector, Emmanuel R. Morgan, confirmed the analysis which had been offered months earlier by Richter. Like Richter, Morgan claimed that "IAEA safeguards against the diversion of sensitive nuclear materials are not presently effective and will not be effective in the foreseeable future."[55] More ominously still, he suggested that

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[52] Ibid., p.2.

[53] Ibid., p.8. (Speaker: Senator John Glenn).

[54] Interview with Fred McGoldrick, conducted via e-mail, 30 June 2000. The Director of the ACDA also felt obliged to advise Congress of speaking out too loudly and indiscriminately, saying that "we must recognize that such activities [civil reprocessing and breeder reactor development] in the stable industrial democracies simply do not in themselves present a proliferation risk." (See *The International Atomic Energy Agency (IAEA: Improving Safeguards*), p.147. Speaker: Hon. Eugene V. Rostow, Director ACDA).

[55] *IAEA Programs of Safeguards*, p.78 (speaker: Emmanual R. Morgan, formerly of the IAEA and the NRC).

the Osiraq attack may simply have underscored the fact that "perhaps the problem is simply bigger than IAEA's ability to handle it."[56]

The Executive was not only having to resist the continuing attacks from Congress. The IAEA General Conference in September 1981 became the forum for expressing the anger provoked by Israel. Consequently, it had ended with a successful vote for the IAEA to suspend all technical assistance to Israel. Moreover, if Israel had not (as requested in UN Security Council Resolution 487) placed its own nuclear facilities under IAEA safeguards by the time of the next General Conference, the suspension of Israel's rights of membership would be considered. "In practice", it was rightly observed, "this would amount to the exclusion of Israel from the Agency."[57] This resolution was opposed only by the United States and Canada, and following the Conference it was announced that the United States was "engaging in what one source described as a 'very fundamental' although thus far informal reassessment of the US government's relationship with the Agency."[58] Much to its annoyance, the Administration and State Department found themselves not only having to defend the IAEA from Congress, but also having to defend Israel from the IAEA.[59]

In March of 1982, the American representative to the IAEA continued to warn of the problems he saw forming in the American-IAEA relationship when he cautioned that "should the Agency become increasingly politicized so that it can no longer meet its responsibilities and especially its vital safeguards mission, the United

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[56] Ibid., p.78.

[57] Fischer, *History of the IAEA*, p.104.

[58] "US, Perturbed with IAEA Politics, Examines Role in Agency," *Nucleonics Week,* vol.22, no.44, 5 November 1981, p.3

States would be forced to reassess its role in the IAEA."[60] A scant three months later, in June, both the Senate and the House of Representatives passed resolutions calling for the withdrawal of the United States from any UN organisation which suspended Israel. Impatience with the IAEA thus combined with the "great concern among Israel's supporters in Congress and elsewhere...that infringement of Israel's rights of participation in any UN-related organisation would lead to moves against Israel all over the UN system."[61]

The General Conference of the Agency was not the only branch of the Agency to disagree vehemently with the Israeli and Congressional assessment of its abilities. Writing on the question of the Agency's safeguards, the Deputy Director-General of the IAEA's Department of Safeguards reiterated Director-General Eklund's claims that there was nothing wrong with the safeguards applied to Tammuz. Gruemm stated, furthermore, that

> this should also have been clear to those who were concerned about the technical potential of the Tamuz reactor. Was the attack therefore really the result of disbelief in the effectiveness of the Agency's safeguards?[62]

In another article, Gruemm appeared to take further issue with Congressional scepticism when he declared that "expectations of what safeguards can do are rather inflated, and confrontation with the limitations of safeguards often leads to the other extreme – disappointment and harsh criticism."[63] In addition, the General Conference

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[59] As one author noted a few years following the Osiraq raid, the reaction of the IAEA meant that "although the US condemned the raid, Washington became the protector of Israel from punitive steps within the IAEA." (Power, "The Baghdad Raid: retrospect and prospect", p.86.)

[60] *The International Atomic Energy Agency (IAEA: Improving Safeguards),* p.121 (Speaker: Richard T. Kennedy, US Representative to the IAEA).

[61] Roger Kirk, "The Suspension of US Participation in the IAEA: 1982-1983," in *International Atomic Energy Agency: Personal Reflections*, (Vienna: IAEA; 1997), p.96.

[62] H. Gruemm, "Safeguards and Tamuz: setting the record straight," *IAEA Bulletin,* vol.23, no.4, p.14.

[63] H. Gruemm, *IAEA Bulletin Supplement 1982,* p.40.

of September 1981 provided the venue for another US-IAEA conflict, originating in the differing official assessments of the attack by the American Administration and that articulated by the IAEA Director-General Eklund. It was in this forum that American Representative Davis declared, in a direct rebuttal of Eklund's evaluation, that "the United States Government...cannot support the view that the Israeli action constituted an attack on the agency and its safeguards regime or that it caused damage to that regime."[64] The disagreements between the United States and the IAEA, then, involved both the bureaucracy of the IAEA as well as the Conference of its member states, and both the American Congress and administration. By the time of the September General Conference, such disagreements had been festering for over a year without any movement towards a resolution.

Finally, the position of Iraq's major supplier – France – remained officially intractable. The French still maintained that the Israeli attack was unjustifiable and that the conditions of supply to the Iraqis had been adequate. To this end, the French government continued to express its determination to rebuild the Osiraq reactor.[65] According to French officials, President Mitterrand "took the position that no grounds existed on which France could refuse to provide Iraq with equipment or technology available to other countries."[66] France, therefore, entered into negotiations with Iraq to rebuild the reactor two months after it had been destroyed.

However, the accusations of having taken insufficient precautions against weaponization were not entirely dismissed by the French and, indeed, "French

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[64] "Statement by US Representative Kenneth Davis to the General Conference of the International Atomic Energy Agency: Resolution Condemning Israel for Attack on Iraqi Nuclear Facility," September 26th, 1981. Reprinted in *Documents on Disarmament 1981,* p.454.

[65] *The Daily Telegraph*, 15 January 1982.

[66] Roger F. Pajak, *Nuclear Proliferation in the Middle East: Implications for the Superpowers,* National Security Affairs Monograph Series 82-1 (Washington, D.C.: National Defense University Press; 1982), p.57.

precautions suggest that the French too [had been] mistrustful of Iraq's intentions."[67] A 1982 announcement by the French government put new conditions on the rebuilding of the reactor. Iraq would be obliged to accept low-enriched caramel fuel rather than high-enriched uranium (twelve and a half kilograms of which had previously been supplied to Iraq by France). In addition, the new conditions required that French technicians remain permanently at the site and that "Iraq would have to include other states in the operation of the installation, making it a regional research center."[68] Iraqi agreement to these conditions, unsurprisingly, was not forthcoming. Nonetheless, French resentment of Israel's action dictated that its support for the penalties against Israel in the IAEA remained. Consequently, France voted with the majority of states at the General Conference in favour of suspending IAEA assistance to Israel and possibly suspending that state from participation the following year.

September 1982 – February 1983

The General Conference of 1982 thus opened within the context of continuing disagreement between the United States and its supporters, and that sizable number of states (including the USSR) who still desired to see Israel punished for its aggression.[69] In the event, the goal of suspending Israel from the Agency was altered somewhat. After the Conference began "it soon became clear...that such a resolution would not get the two thirds majority that the Statute required for such a decision."[70]

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[67] Fischer, *Stopping the Spread of Nuclear Weapons,* p.67.

[68] Spector, *Nuclear Proliferation Today,* p.183.

[69] The USSR, while displeased with Israel's behaviour, nonetheless had no desire to see the Agency damaged as a consequence. As one Soviet delegate to the conference recalled, the Soviet delegation "had instructions to imporess upon others (including the Arab states) that the Agency is a 'technical' organization and any political decisions...are up to the UN and its Security Council." (Roland Timerbaev, interview conducted via e-mail, 17 December 1999.)

[70] Fischer, *History of the IAEA,* p.106.

The Arab states, who were spearheading the movement against Israel, then sought to obtain a vote in favour of rejecting Israel's credentials, which required only a majority.

The vote on Israel's credentials took place amid formal instructions from Washington that required the American delegation to walk out of the Conference and declare that US participation in the Agency would be reconsidered.[71] When the vote was finally taken it was evenly split, the resolution thus not achieving the necessary majority to pass. At this point, however, the delegate from Madagascar – whose vote had not been counted – claimed to have been present at the time of the vote and wished to register his vote in favour of rejecting Israel's credentials. This was duly approved and the United States and United Kingdom left "followed closely by most other Western delegations."[72] The State Department, in justifying the American decision both to leave the Conference and to withdraw temporarily from the IAEA, called the rejection of Israel's credentials "unjustifiable and illegal."[73] Kenneth Davis, the head of the US delegation went further, stating that "this pattern of abusing the UN system to carry on political vendettas is corrosive and dangerous."[74]

The suspension of US involvement in the IAEA – the "reassessment" as it was called – was more than simply a case of the Americans physically absenting

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[71] These instructions to leave the Conference in the event of a rejection of Israel's credentials were, according the American Resident Representative to the IAEA (Roger Kirk), an eleventh-hour instruction. Kirk later wrote of the US delegation launching "a frantic last-minute lobbying effort, telling every representative they could find what denial of Israeli credentials would now mean." (See Kirk "The Suspension of US Participation in the IAEA," p.98.)

[72] Fischer, *History of the IAEA*, p.107. France, it should be noted, was not among the states which left the Conference in protest at the vote against Israel. The USSR, it almost goes without saying, had voted in favour of the rejection of Israel's credentials. For a more thorough discussion of the process leading up to the US walkout, see Kirk, "The Suspension of US Participation in the IAEA" or Mark F. Imber, Chapter 5 of *The UN, UNESCO, ILO and IAEA: Politicization and Withdrawal in the Specialized Agencies*, (London: Macmillan Press, Ltd.; 1989).

[73] *The New York Times*, 25 October 1982.

[74] Ibid.

themselves from the Agency. It also entailed the suspension of vital American funding to the IAEA. As the United States was the main source of the IAEA's budget, an American reassessment necessarily affected the Agency's ability to carry out its activities. Only a month after the American walkout, Director-General Blix was reported as saying that if the suspension of American participation stretched into the following year, "it could cripple our operations."[75] The Agency's Safeguards Division, however, continued to maintain that the Israeli allegations of inadequacy and incompetence were unfounded. Another article by its Deputy Director appeared in the IAEA Bulletin, affirming that the IAEA had applied diversion hypotheses to Osiraq and found it untenable. Nonetheless, the article pointed out, the Agency had intended both to install cameras and carry out more frequent inspections once fuel had been introduced.[76]

The American reassessment of its participation in the IAEA lasted for five months – until the next meeting of the Board of Governors, on February 22nd, 1983. During this time, the divisions on the issue between Congress and the executive branch continued. While the executive recommended the resumption of American involvement, Congress still insisted on IAEA Board certification of Israel's full participation.[77] It was eventually agreed that in order to avoid rejection of a resolution reinstating Israel's credentials, the Chairman (Emil Keblúšek) would simply announce the Board's acceptance of the Director-General's report.[78] This report, presented to the Board of Governors, would note that the US had been

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[75] *The New York Times,* 11 November 1982.

[76] H. Gruemm, "Safeguards verification – its credibility and the diversion hypothesis," *IAEA Bulletin,* vol.25, no.4, December 1983, p.29.

[77] Kirk, "The Suspension of US Participation in the IAEA," p.100.

[78] For a more detailed discussion of these events from an insider's perspective, again see Kirk, "The Suspension of US Participation in the IAEA."

informed of Israel's status as a fully participating member of the IAEA. Director General Blix would then send a letter to this effect to the American Secretary of State. This statement duly passed without objection, and the US officially resumed its own participation in the Agency.

February 1983 – September 1985

The re-entry of the United States into the IAEA was not quite the final act in the drama which had begun in June 1981. However, the temporary withdrawal and resumption of participation by the US certainly was the most remarkable of the events which were inspired by the bombing of Osiraq. The events of 1981 nonetheless resurfaced periodically in the context of the nonproliferation regime. Such recurrences were subdued and tended simply to perpetuate the anger at Israel and the United States rather than translating that anger into any significant regime change.

The IAEA General Conference of 1983, despite the commotion of the previous year, still saw continuing challenges to Israel's credentials. While the credentials were not rejected, "strongly critical"[79] resolutions were adopted "amid much verbal antagonism directed against both Israel and the USA."[80] The same was true in the General Conferences of both 1984 and 1985.[81] The General Conference of 1985 witnessed the last gasp of the reaction to the Osiraq raid, in the form of an Iraqi-sponsored resolution calling on Israel to withdraw what had become known as the Begin Doctrine.[82] This resolution, however, failed to pass by the two-thirds majority

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[79] Imber, *The UN, UNESCO, ILO and IAEA,* p.93.

[80] Ibid., p.93.

[81] The Conference of 1984 included China, which had officially joined the IAEA in January.

[82] This resolution, predictably, found support from the Arab states, Iran and the Eastern bloc.

required and with its passing, the Osiraq incident was, outwardly at least, laid to rest in the context of the IAEA and the nuclear nonproliferation regime as a whole.[83]

A year previous to this had seen the Reagan Administration drop its opposition to a reconvening of the Nuclear Suppliers Group. Contrary to the previous vigorous rebuttals of Congressional suggestions that the group be reconvened, the American government requested a meeting of the NSG, which duly occurred in July 1984. However, attendance at this meeting (the first by the group since 1977) was disappointing, consisting only of the Western Members of the NSG, with the four East Bloc members of the NSG deciding not to attend.[84] This meeting focused on the future role of emerging suppliers and attempts by countries, such as Pakistan, to elude controls. At the behest of the United States, the discussions also centred around the American "initiative to gain Suppliers Group agreement to ban future nuclear sales to nations refusing to accept IAEA safeguards on all of their nuclear installations."[85] While no agreement in this area was reached, the NSG did expand its membership by one, with Australia moving from being an observer to a participant. Meanwhile, the questions raised by the Osiraq bombing regarding the possible proliferation by Iraq and the forceful counterproliferation by Israel, went undiscussed.

At the same time as the shock of 1981 was finally fading from – or being replaced in – the consciousness of the IAEA and the Western component of the NSG, the Third NPT Review Conference was set to take place. These Conferences had not had a happy history. The First and Second Review Conferences of 1975 and 1980 had failed to reach the consensus needed to produce a final document. As a

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[83] Instead, a resolution was adopted which confined itself merely to criticising the Osiraq bombing and requesting that Israel submit to full-scope safeguards.

[84] These four were, of course, the USSR, East Germany, Poland and Czechoslovakia.

[85] Spector, *Nuclear Proliferation Today*, p.335

consequence, the desire to produce such a document – to have a "successful" conference – was strong. The President of the Conference, Mohammed Shaker, recalled that "it was accepted by almost all the parties present that a Final Declaration would be the goal of the Review Conference."[86] In the three meetings of preparatory committees prior to the Conference, the spectre of Osiraq materialized in the form of a proposal by Iraq to condemn Israel for its action. A compromise was reached in which, as the Final Declaration stated, the conference expressed

> its profound concern about the Israeli military attack on Iraq's safeguarded nuclear reactor on 7 June 1981...[and] ...recalls Security Council Resolution 487 of 1981 strongly condemning the military attack by Israel.[87]

By merely recalling the condemnation of Israel by another UN body, both the opponents and supporters of Israel were assuaged. The Third NPT Review Conference thus ended on September 22nd with its first ever Final Declaration. This declaration, which also took care to reaffirm the confidence in the abilities of the IAEA,[88] echoed the near-simultaneous IAEA General Conference in being the last formal gasp of the Osiraq bombing.

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[86] Mohammed Ibrahim Shaker "The legacy of the 1985 Nuclear Non-Proliferation Treaty Review Conference: the president's reflections," in John Simpson (ed.), *Nuclear Nonproliferation: An Agenda for the 1990's*, (Cambridge: Cambridge University Press; 1987), p.10-11. Shaker further recalled that "it was clear that was a determination on the part of almost every participant to avoid repeating the experience of 1980" (p.13).

[87] "Final Declaration of the Third Review Conference of the NPT" (NPT/CONF.III/64/I 21 September 1985), Article IV. para. 10, reprinted in *UN Blue Books Series Volume III: The United Nations and Nuclear Non-proliferation* (New York: United Nations Department of Public Information; 1995). The Final Declaration went on to state that the conference "further noted the demands made on South Africa and Israel to place safeguards on all their nuclear facilities to pledge themselves not to manufacture or acquire nuclear weapons or other nuclear explosive devices" (Article IV, para.20).

[88] The Final Document also stated that the Conference "expresses the conviction that IAEA safeguards provide assurance that States are complying with their undertakings and assist States in demonstrating this compliance" (Article III, para.2). The Document also noted that "the IAEA, in carrying out its safeguards activities has not detected any diversion of a significant amount of safeguarded material to the production of nuclear weapons, other nuclear explosive devices or to purposes unknown" (Article III, para. 11), in "Final Declaration of the Third Review Conference of the NPT" in *UN Blue Books Series Volume III.*

External to the more formal setting of the IAEA and the Review Conference, the bombing had still provoked little discernable change. Iraq, by the time of these conferences in Autumn of 1985, had neither rebuilt nor replaced Osiraq. Nor had it secured any nuclear materials or equipment for the Tuwaitha site, at least through open transactions. The new conditions which had been attached by the French to the rebuilding of the reactor remained objectionable in the eyes of Iraq.[89] In the United States, the focus which Congress laid on IAEA safeguards faded following the resumption of American participation in the Agency. The Reagan Administration, meanwhile, embarked upon improved relations with Iraq, whose war with Iran was now stretching into its fifth year. In March of 1984, just under three years since the bombing of Osiraq had raised questions about Iraq's nuclear intentions, it was reported that "American diplomats pronounce themselves satisfied with relations between Iraq and the United States and suggest that normal diplomatic ties have been restored in all but name."[90] These relations were, in fact, officially restored seven months later, in November 1984.[91]

The History and Outcome of the Shock: a case of regime change?

The way in which the preceding narrative of events sheds light on the pattern of the regime's development may now be understood. The bombing of Osiraq, like the 1974 Indian test, clearly qualified as a shock which interrupted a period of

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[89] Writing in 1986, one commentator noted that there had been, thus far, "no firm indicators that Iraq had accepted these requirements or, indeed, that France was actively interested in a renewed supply role" (Power, "The Baghdad raid," p.860).

[90] *The New York Times*, 29 March 1984.

[91] The same article also stated that "Western European diplomats assume that the United States now exchanges some intelligence on Iran with Iraq." (*The New York Times,* 29 March 1984). Whether this was in fact the case or not – and the State Department officially claimed neutrality insofar as the Iran-Iraq War was concerned – it was certainly true that, slightly more than three years after the Osiraq bombing, relations between the US and Iraq had vastly improved.

dormancy in the regime. Nonetheless, it has become clear that the case of the Osiraq bombing shows that regime change does not inevitably follow shocks to the regime. In this, the shock differs sharply from the Indian case.

This said, the period directly following the shock – the initial reaction to the raid – echoed that following the Indian test. As in 1974, the immediate response revealed a clear divergence of expectations as to what, if anything, needed to be done as a consequence. Iraq's main supplier – France – and the IAEA (which had been responsible for safeguarding the Iraqi reactor) both rejected the accusations of incompetence which Israel levelled at them. France insisted that its conditions of supply to Iraq were adequate, while the IAEA defended its safeguards and their ability to detect a possible diversion. Both attacked Israel's act of counterproliferation as posing far more of a danger than Osiraq ever had. The American reaction, however, was very different. The Reagan Administration, while condemning Israel, was simultaneously concerned about the anti-Israel and anti-IAEA sentiments being expressed. Congress, meanwhile, emphasized not the dangers of Israel's attack, but rather the dangers of the inadequate standards of supply, safeguards and inspections. Again, in this initial confusion and disagreement following the shock, the narrative of the Osiraq bombing continues to echo the Indian test.

It is clear, however, that the diverging expectations which followed the Osiraq bombing, did not reconverge in a manner amenable to eventual regime change. The Indian test had eventually been followed by the creation of new rules, decision-making procedures and, indeed, a new regime institution in the form of the NSG. These changes were further shown to have involved an alteration of some of the norms and principles of the regime which had prevailed prior to the 1974 explosion. The shock of 1981 did not follow this pattern. Instead, the after-effects of the

bombing were felt largely in the politicisation of the IAEA. There is no clear instance of the Osiraq bombing having inspired any significant change to the rules and decision-making procedures of the regime, let alone to its norms and principles. No new institutions along the lines of the NSG were created. Indeed the partial reconvening of the NSG itself did not occur until 1984. This meeting witnessed an American attempt to gain an agreement on the banning of nuclear sales to states without full-scope IAEA safeguards. However, even this (ultimately unsuccessful) measure cannot be attributed to concerns over Iraq, as that state was already subject to the full-scope safeguards required under the NPT.[92] The repeated condemnations of the Israeli attack on the Iraqi reactor, which made a regular appearance in the IAEA General Conferences of 1981 – 1985 as well as at the NPT Review Conference, did not (however heartfelt) constitute the alteration, or establishment, of a norm against such acts of counterproliferation. Such a norm may be assumed already to have existed, with the sense of outrage at Israel's action as evidence of a belief that such a norm had been violated.

Conclusions:

The narrative of years both before and following the bombing of Osiraq by Israel does not indicate regime change. Indeed, the nuclear nonproliferation regime which emerged from the Third NPT Review Conference was not significantly different from the one which had existed in the last year of the 1970's although, for the first time, a Review Conference had managed to agree a Final Declaration. No

[92] There was, in addition, a 1988 agreement between India and Pakistan not to attack each other's nuclear facilities (*Agreement Between Pakistan and India on the Prohibition of Attack Against Nuclear Installations and Facilities,* signed at Islamabad on 31 December 1988 and entered into force on 27 January 1991). While there can be little doubt that the Israeli attack on Iraq at least partially inspired such an agreement, this cannot constitute an example of regime change, having occurred, firstly,

significant development or elaboration of rules and decision-making procedures had been created, nor had any new institutions. Consequently, the norms and principles of the nonproliferation regime stayed similarly unaltered by the shock of 1981. Although the shock echoed the Indian test by interrupting a phase of regime quiescence and leading to a similar divergence of expectations, these expectations did not reconverge to initiate regime change. It is thus not possible to understand the shock of the Osiraq bombing as part of a non-incremental pattern of regime development. In this case, at least, no problems are posed for the understanding of change in mainstream regime theory.

More interesting still is the ability of this case to provide an answer to the second question of the three which this study seeks to answer. This question asked whether or not, if regime change followed from a shock to the regime, it could be assumed that such a shock would therefore necessarily lead to regime change. The case of the Indian test did not contradict this assumption. The Osiraq case, on the other hand, appears to do just that, standing as a clear example of a shock to the previously inactive regime which was not followed by regime change. The third question, of how this regime change or (in this case) this absence of regime change, may be understood still remains to be answered. Having completed the narrative of the events, it is now possible to begin to answer this last question.

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outside the context of the regime in the form of a bilateral agreement between, secondly, two non-NPT members.

Chapter 5: The 1981 Bombing of Osiraq – Understanding Regime Change

The previous chapter argued that the bombing of Osiraq was an event which, while a shock to the regime, did not herald a period of rapid regime change. The raid raised serious questions about the efficacy of the IAEA system, the capabilities of an apparently inadequate regime, and the assumption that accession as an NNWS to the NPT guaranteed benign intentions. However, the eventual outcome in terms of the development of the nonproliferation regime was such that no significant change took place, certainly when examined in light of the eventual consequences of the Indian test.

There is nothing which could be construed as preordained about such a result. Superficially at least, an attack on a nuclear facility (albeit one into which fissile material had not yet been introduced) was stunning evidence of a lack of confidence in the utility of the nuclear nonproliferation regime, in particular the safeguards as implemented by the IAEA. Such a raid was the first of its kind, shattering a taboo which had existed regarding the status of nuclear facilities as military targets. As in the case of the Indian test six years earlier, this attack on the credibility of the regime was not lost on many in the United States Congress. In this forum, voices were raised calling for the United States to lead the way towards change to the nonproliferation regime and to close the loopholes considered to have been exposed by the events of June 9th.

The previous chapter has shown not only that the nuclear nonproliferation regime did not change in the aftermath of the Osiraq raid, but also that there was, with the exception of the US Congress, very little will to bring about such change. The key actors of the previous chapter were IAEA (whose safeguards had been dramatically

questioned), France (the supplier of the Iraqi reactor which had so unnerved the Israelis), the USSR (a former supplier of Iraq and key player in the regime), and the United States (the main ally of Israel, arbiter of the Middle East peace process, and crucial member of the nuclear nonproliferation regime). None of those four – including, crucially, the United States – was inclined to pursue regime change.

Given that the outcome of the 1981 shock was so different to its predecessor, it prompts a comparison between the interpretations of the Indian test with those which followed the bombing of Osiraq. The subsequent discussion will therefore examine how the shock was generally understood by the relevant actors. Like the Indian case, this will be achieved by a discussion of the understandings of the danger revealed by the shock, the responsibility for leading change, the immediacy of action required, and solvability of the problems raised by it. It will be contended that American interpretations differed sharply between Congress, the State Department, and the Reagan Administration and that the latter two won the day. Moreover, it will be argued that in the international context, no consensus among the key players was reached – or even sought – on the need for, and possibility of, regime change. The understandings of the shock which facilitated the post-1974 regime change to occur differed sharply in the case of Osiraq: a shock-which-wasn't.

Understanding of Danger:

The United States

The Osiraq shock was not fated to become the vehicle through which rapid development of the nonproliferation regime was to occur. It also became apparent, during course of the narrative of events, that significant disagreements over the incident existed between the executive and the Congress. This included their

respective interpretations of the dangers revealed by the attack. While this superficially resembled the reaction to the Indian shock, such similarity was illusory. Following the bombing of Osiraq, both the executive and Congress accepted and took a proactive interest in, the danger posed by the attack. There was, however, no consensus on the nature of this danger. Congress appeared to see the attack as having justifiably undermined the credibility of the regime by exposing problems in the IAEA safeguards system. The State Department and Reagan Administration, on the other hand, saw the bombing as unnecessarily undermining the credibility of the regime by fomenting unnecessary criticism of the IAEA and, more importantly, by detracting attention from the real focus of danger: the damage to the Middle East peace process. Moreover, the shock itself was beset with ambiguity. Iraqi nuclear proliferation was the subject of Israeli accusations but had not been decisively demonstrated in the way the that Indian test had demonstrated Indian nuclear capability. This did little to assist any agreement regarding the danger posed. Consequently, the context in which this danger was interpreted differed sharply and remained at odds.

The first Congressional hearings on the subject were convened a mere week and a half after the raid. The attack was understood by several members of Congress as a genuine danger to the regime by having brought to light the inadequacy of IAEA safeguards. From the first Senate hearings, sentiments were expressed that, in the face of the Agency's incompetence, Israel had had little option. One Senator opined that "were I in Israel's shoes, would I have done the same thing? I am not sure, but I would have been sorely tempted."[1] Another declared that the Israeli action,

> done in self defense, in my judgement, very vividly brought

[1] *The Israeli Air Strike,* Hearings before the Committee on Foreign Relations, United States Senate, ninety-seventh Congress, first session, on the Israeli Air Strike and Related Issues (June 18, 19, and 25, 1981), p.19 (Speaker: Senator Tsongas).

> to attention of the world the scope of that threat [nuclear proliferation], and the inability of testing agencies or inspecting agencies to remove that threat.[2]

These sentiments were accompanied by a sneaking admiration for the audaciousness of the Israeli attack. Indeed, a government publication, later that year, noted that "many people, among them Members of Congress, applauded Israeli efficiency and daring."[3]

In Congress, the event was initially considered to have revealed a danger which could undermine the credibility of the regime and open a door through which others might follow. Senator John Glenn, who had played such an important part in rousing Congress over the Indian test, attempted to do the same again, declaring that "no event since India's explosion of a nuclear device in 1974 has underscored so dramatically the dangers of nuclear proliferation."[4] A colleague also alluded both to the existence of a serious threat to the goals of the nonproliferation regime, stating: "that threat [of nuclear proliferation] is no better exemplified, Mr. Chairman, than a nuclear weapon falling into the hands of a country like Iraq."[5] This initial Senate hearing echoed the understanding of danger which had prevailed six years previously and evidenced serious concern not only over the intentions of Iraq, but over those it might inspire.

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[2] Ibid., p.25 (Speaker: Senator Boschwitz). Such sentiments were typical of these hearings, and Israel's action was generally view as being regrettable but understandable, given the ineffectual nature of the IAEA.

[3] *Congress and Foreign Policy – 1981,* Committee on Foreign Affairs, US House of Representatives, (Washington, D.C.: US Government Printing Office; 1982), p.98.

[4] *The Israeli Air Strike*, p.11 (Speaker: Senator Glenn).

[5] Ibid., p.23 (speaker: Senator Boschwitz).

Such views were reinforced by the testimony, in both the initial Senate and House of Representatives hearings, of former IAEA inspector Roger Richter.[6] Richter's assertion – that the IAEA would be incapable of detecting a diversion of nuclear material for military purposes – provided the members of the Senate and the House with a scapegoat. As was pointed out in the narrative of the events following the attack, the hearings held after the testimony of Richter focused heavily on the IAEA and the question which had been raised regarding its safeguarding abilities. Hearings in both the Senate and the House of Representatives contained expressions of concern that the effectivenes of the verification component of the nonproliferation regime had been justifiably undermined.[7] This interpretation of the danger as occurring to the regime was later underscored by Congressional suggestion to the Administration that the NSG be reconvened.[8] The Senate Foreign Relations Committee hearings in December 1981 again called on the testimony of a former IAEA inspector to damn the competence of that agency's safeguards and declare that "perhaps the problem is simply bigger than the IAEA's ability to handle it."[9]

The American reaction, thus far, continued to echo that which had followed the Indian test of 1974. Broad agreement existed in Congress that the danger implied by the shock was two-fold. Firstly, the danger lay in its having undermined

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[6] See *The Israeli Air Strike,* p.108 and *Israeli Attack on Iraqi Nuclear Facilities,* Hearings before the Subcommittee on International Security and Scientific Affairs on Europe and the Middle East and on International Economic Policy and Trade of the Committee of Foreign Affairs, House of Representatives, Ninety-seventh Congress, first session, June 17 and 25, 1981, p. 58.

[7] On December 2nd, 1981, a hearing entitled *IAEA Programs of Safeguards* was held in the Senate, while on March 3rd and 18th, 1982, a hearing entitled *The International Atomic Energy Agency (IAEA): Improving Safeguards* was held in the House of Representatives.

[8] *The International Atomic Energy Agency (IAEA): Improving Safeguards,* p.219.

[9] *IAEA Programs of Safeguards*, hearing before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, first session, December 2, 1981, p.78. The testimony was offered by Emmanuel R. Morgan, a former employee of both the IAEA and the NRC. Morgan also maintained that "IAEA safeguards against the diversion of sensitive nuclear materials are not presently effective and will not be effective in the foreseeable future." (Ibid., p.78).

confidence in the abilities of the nonproliferation regime to verify compliance and secondly, in having hinted darkly at a future in which states would feel compelled to take matters into their own hands, as the Israelis had done. In the Indian case, this interpretation of the shock centred on the role of nuclear exports and peaceful use, and in the Osiraq case, on the efficacy of IAEA safeguards. Indeed, the bombing of Osiraq, in the words on one commentator, "lent credence to hardline reformists in Congress who had been arguing for years that national survival dictated putting nonproliferation before all other foreign policy concerns."[10] The vocal supporters of nonproliferation notwithstanding,[11] the hearings which followed the destruction of Osiraq indicated little confidence in the competence of the IAEA.

The divisions between Congress and the executive revealed themselves almost immediately following the attack itself, and continued to widen in the following months. An Administration memorandum of October 1981 had proposed taking power from the NRC over nuclear exports and giving it to the State Department[12] – a proposal which was credited as having increased "suspicions about the administration's insensitivity to congressional concerns."[13]

The Administration's disinterest was not, however, akin to that which followed the Indian test. On the contrary, the bombing of Osiraq caused a great deal of concern to the Reagan Administration and the State Department, which also saw the bombing as an attack on the credibility of the nonproliferation regime. The difference in this understanding of the danger, however, lay in the widely-held

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[10] Beckman, *Nuclear Non-Proliferation,* p.374.

[11] Senator John Glenn was perhaps the best example of one of those to whom the nonproliferation regime was of paramount concern.

[12] Beckman, *Nuclear Non-Proliferation,* p.376.

[13] Ibid., p.376.

executive belief that the primary cause for concern was the damage that had been done to the stability of the region, not the regime. The anxiety which undoubtedly followed from the events of June 1981 reflected the concern "that the operation threw the Reagan Administration's emerging approach towards the Middle East into disarray."[14] The Osiraq raid, in the eyes of the executive, was indeed both a danger in itself and as a worrying omen, but did not reflect badly on the effectiveness of the nonproliferation regime and, rather, had much more to do with the stability of the Middle East and the viability of the peace process.

This predominantly regional understanding of the context of the danger was present from the beginning, and may be first located in the official State Department reaction to the news of Israel's action, which said nothing about nuclear nonproliferation, but did state that the attack "cannot but seriously add to the already tense situation in the area."[15] This regional interpretation was entrenched shortly thereafter, when the American Representative to the UN stated that "it is precisely because of my government's deep involvement in efforts to promote peace in the Middle East that we were shocked by the Israeli air strike on the Iraqi nuclear facility."[16]

Shortly after these official statements, the effort began to persuade Congress of how the danger should correctly be understood and to dismiss the growing concerns about the efficacy of the IAEA. In the House of Representatives hearing a scant eight days after the attack, the statement read out by the Under Secretary for

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[14] Shai Feldman "The Bombing of Osiraq – Revisited," *International Security*, vol.7, no.2, Fall 1982, p.128.

[15] *The Washington Post*, 9 June 1981.

[16] "Statement by the US Permanent Representative (Kirkpatrick) to the UN General Assembly: Israeli Attack on Iraqi Nuclear Facility," [extract] June 19, 1981. Reprinted in *Documents on Disarmament, 1981*, p.230.

Political Affairs (Department of State) identified the repercussions of the shock as serving to "seriously complicate our efforts to resolve the various problems in the area through peaceful means."[17] The Administration, it was proclaimed, was "dismayed by the damage which has been done to the search for peace in the Middle East."[18] President Reagan himself tellingly stated to reporters that "the biggest thing that comes out of what happened is the fact that this is further evidence that a real peace, a settlement for all of the Mideast problems is long overdue."[19]

The determination to place the event in a regional security context explains the executive belief that criticism of the safeguards aspect of the regime was both unnecessary and damaging. This, in turn, helps to account for the Administration's anger at the 'civil unrest' in both the IAEA and Congress. Although there was concern with the attacks which had been made on the IAEA as a consequence of the bombing, there is little evidence of a fear that the regime had been undermined by the possibility that NPT states might harbour nuclear ambitions, or by the threat of future, Israeli-style counterproliferation. One former State Department official recalled, for example, that "as I recall, we were not terribly concerned that the Israeli bombing might lead others like Pakistan or India to launch similar attacks on each others' nuclear facilities."[20]

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[17] *Israeli Attack on Iraqi Nuclear Facilities,* hearings before the Subcommittee on International Security and Scientific Affairs on Europe and the Middle East and on International Affairs, House of Representatives, Ninety-seventh Congress, first session, June 17 and 25, 1981, p. 3 (speaker: Ambassador Walter J. Stoessel, Jr.).

[18] Ibid., p.5

[19] "The President's News Conference, 16 June 1981," in *Public Papers of the Presidents of the United States – Ronald Reagan, January 20th 1981 to December 31st 1981,* (Washington, D.C.: US Government Printing Office; 1982) p.520. This regional interpretation of events was borne out by his diary entry of June 9th, 1981 in which he observed: "its high time to raise h—l worldwide for a settlement of the Middle East problem. What has happened is the result of fear and suspicion on both sides. We need a real push for solid peace" (Ronald Reagan, *An American Life,* (London: Hutchinson; 1990), p.413).

[20] From an interview with Fred McGoldrick, conducted via e-mail, 30 June 2000.

Clearly, the implications of the shock were far from self-evident, encouraging the divisions between Congress and the executive. "In sum," one analyst observed, "while the Reagan Administration may have been reestablishing its good faith with nuclear suppliers and users, its relations with Congress in the matter of nonproliferation continued to deteriorate."[21] An official submission by the Department of State to the first Senate hearing on the subject continued to argue that "fundamentally, the Israeli bombing was part of the unresolved conflict in the Mideast, in which the IAEA was not central, nor was the NPT."[22] The Senate and House's inclination to see the attack as having implications for the IAEA was thus dismissed, as indeed were those former IAEA inspectors and other prophets of doom who had attempted to convince Congress of the threat to the safeguards aspect of the nonproliferation regime. Official State Department comments on an NRC letter to Congress, which expressed concerns about the effectiveness of IAEA safeguards, were almost contemptuous. The NRC, Congress was told, "oversimplifies a complex subject, and may therefore be misleading....We believe that, at the present time, the IAEA has at its disposal all the techniques and instruments necessary to detect...the diversion of nuclear materials."[23] As for the hapless Roger Richter, whose testimony in the first Senate hearing had opened the floodgates for widespread criticism of perceived IAEA inadequacy, the dismissal of his statements were more scathing.

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[21] Beckman, *Nuclear Non-Proliferation,* 377-78.

[22] "Has the IAEA Role Been Impaired?" (submitted by the Department of State in answer to the question of whether the role of the IAEA had been compromised by the attack) in *The Israeli Air Strike,* p.6. Another former State Department official recalled that "the US did see this attack as emblematic of the Middle East peace problem" (Interview with Fred McGoldrick via e-mail, 30 June 2000).

[23] "State Department's Comment on the NRC Letter to Congress," in *IAEA Programs of Safeguards,* p.28-29. The letter in question was written by Nunzio J. Palladino – chairman of the NRC – and, among other things, expressed concern "that the IAEA safeguards system would not detect a diversion in at least some types of facilities...[or]that the member states would be notified of a diversion in a timely fashion." (Reprinted in *IAEA Programs of Safeguards*, p.2).

Richter, claimed an ACDA representative, "presents no specific facts to support his claim except to refer to the existence of facilities and materials in Iraq."[24] Congress was then informed that

> the Administration is separately providing answers to the question as to whether Iraq was engaged in a nuclear weapons program. From our perspective Mr. Richter's testimony sheds no additional specific light on this question[25]

Senator Glenn, who thus saw his latest efforts to rouse the State Department and Administration to action firmly rebuffed, commented bitterly on "the State Department's reflexive desire to classify and hold any information which raises questions about the IAEA system."[26] Senator Cranston, too, was on record as complaining that

> twice this year former IAEA inspectors have come forward and expressed their deep concern about safeguards inadequacies, and twice the State Department had responded with deliberate campaigns to discredit these individuals and to cast their conclusions as those of disgruntled former employees.[27]

There existed a clear discrepancy between the understanding of danger within Congress and within the executive. Unlike the case of the Indian test, Congress remained unable to convince the State Department and Administration of the threat to

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[24] *Israeli Attack on Iraqi Nuclear Facilities*, p.59.

[25] Ibid., p.59.

[26] *IAEA Programs of Safeguards*, p.8.

[27] Reprinted in *Nuclear Safeguards: A Reader*, Report Prepared by the Congressional Research Service, Library of Congress for the Subcommittee on Energy Research and Production, transmitted to the Committee on Science and Technology, US House of Representatives, Ninety-eighth Congress, first session, December 1983, p.729. Representative Hart lashed out at the Administration, complaining that "despite the inadequacies of safeguards, the Reagan Administration wants to make the United States...a 'reliable supplier of nuclear technology and materials throughout the world.'" (*The International Atomic Energy Agency (IAEA): Improving Safeguards*, p.2. Speaking in front of the Senate, Hart accused the administration of "sending the wrong signals to the world about US commitment to nonproliferation." (*Congressional Record – Senate*, Tuesday, 16 June 1981, Proceedings and Debates of the 97th Congress, first session).

the nonproliferation regime – a step which the events of 1974 – 1978 showed to be crucial in inspiring them to action.

The IAEA

How to interpret the danger revealed by the attack likewise affected its overall assessment by the IAEA. As has previously been noted, the capabilities of IAEA came under heavy attack from Congress as well as from independent observers.[28] Its response was defensive, and marked by an unwillingness to believe that the attack required changes to the safeguards system. Instead, the IAEA bureaucracy largely considered that the reaction to the bombing had unfairly placed the organisation itself – both its safeguarding abilities and its loftier goals of universal access to peaceful nuclear technology – under attack. The hazard posed by the shock had, thus far, been interpreted in Congress as indicating problems in the regime and in the executive as representative of problems in the region. The IAEA's Department of Safeguards was to interpret the danger of the shock in a third way: as representative of the ignorance about the Agency and the lack of faith in its abilities, and thereby a danger to the IAEA itself. The shock was not understood as having revealed problems in the regime but was seen as having actually endangered the regime by undermining in the Agency's credibility.

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[28] Typical statements, as demonstrated earlier, referred to the "pitiful inadequacy of the IAEA" (Representative Markey speaking during *The Israeli Air Strike,* p.195) and assertions of the "increasing signs that the Agency is beset with technical and political problems" (Senator Percy speaking during *IAEA Programs of Safeguards*, p.2). In addition, the IAEA came under fire in a variety of journals, most notably, Paul Jabber, "A Nuclear Middle East: Infrastructure, Likely Military Postures and Prospects for Strategic Stability," in ACIS Working Paper No. 6, Center for Arms Control and International Security at University of California, L.A., September, 1977; Trudy Rubin, "That Israeli Raid on the Iraqi Reactor: the facts – and deeper issues" *Christian Science Monitor,* 24 June 1981; Richard Wilson, "Using Treaties, Not Air Strikes to Halt Nuclear Spread," in Ibid.; Anthony D'Amato "Israel's Air Strike Upon the Iraqi Nuclear Reactor," *The American Journal of International Law,* vol.77, 1983.

This sense that the bombing stood as an implicit attack on the effectiveness of safeguards was articulated in the address to the Board of Governors by Director-General Eklund, who had immediately stated that "from a point of principle, one can only conclude that it is the Agency's safeguards system which has also been attacked."[29] The notion that the capabilities of the IAEA had been unjustly and wrongly found wanting, was underscored by David Fischer (at the time a Special Adviser to Director General Eklund) who confirmed that "the Director-General and the Board of Governors also interpreted the attack as an assault on IAEA safeguards."[30] The Agency's *raison d'être*, the support of the peaceful development of nuclear power, was felt to be unnecessarily threatened by the outcry. The fear that this aspect of the Agency's work was threatened by such criticism was expressed in an IAEA Bulletin article entitled, "Peaceful nuclear development must continue."[31] The attack was perceived as a dangerous precedent, as it had opened the door for a potentially damaging challenge of the IAEA Statute's Article III.A.1, guaranteeing assistance in the development of peaceful uses for atomic energy. This concern was expressed by both Director-General Eklund and, as the previous chapter demonstrated, was a bone of contention in the General Assembly debates that followed.[32]

The IAEA understanding of the danger posed by the Osiraq incident was therefore predicated on the sense of injustice that accompanied it. The organisation

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[29] Speech reprinted in "Peaceful Nuclear Development Must Continue," *IAEA Bulletin*, vol. 23, no.3, p.4-5.

[30] Fischer, *History of the IAEA,* p.104.

[31] *IAEA Bulletin*, vol.23, no.3.

[32] Eklund, in his address to the Board of Governors, quoted Article III.A.1, stating that he was "personally convinced that the right attitude that the Member States and the Agency should continue...'to encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world.'" Ibid., p.6

accepted that the credibility of safeguards had been damaged not, crucially, by the attack itself but by the unjustified over-reaction in some levels of government and by the "technical ignorance" of the media.[33] Furthermore, the belief that the shock had set a dangerous precedent was predicated not on its having disclosed a loophole in the regime, but as having augured a future in which one of the crucial aspects of the IAEA's mandate – aiding the development of peaceful nuclear energy – could be challenged and put on trial.

France and the USSR

Although less influential in the eventual outcome of the Osiraq shock, the interpretations of this event by France and the USSR require some clarification. As was discussed previously, the governments of both France and the Soviet Union reacted angrily to the Israeli accusations. Their official assessments of the threat created by the shock echoed that of the executive branch of the United States. The Israeli attack, according to the headline of *Le Monde,* "was judged unacceptable by Paris."[34] Prime Minister M. Pierre Mauroy stated that "the raid cannot but increase the tension in this part of the world."[35] This tendency to view the danger in the context of the region rather than the regime was clear, and contained expressions of anger with Israel which were, for the most part, absent in the American expressions of regret.[36]

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[33] Gruemm, "Safeguards and Tamuz: setting the record straight," p.10.

[34] *Le Monde,* 10 June 1981. ("Le raid israelien est jugé inacceptable par Paris.")

[35] Official statement by Prime Minister Mauroy, reprinted in *Le Monde*, 10 June 1981. ("un tel raid ne peut qu'accoître la tension dans cette région du monde.")

[36] The generally pro-Israeli sentiments of the new President Mitterand was demonstrated to have limited such anger to verbal expressions of annoyance only.

In this, the American and French reactions were similar to that of the Soviet Union, whose displeasure with Israel combined with the conviction that the shock was most accurately understood in terms of its destabilising effects on the region. It will be recalled that Minister of Defence – Dmitri Fedorovich Ustinov – declared angrily that "these Israelis completely threw aside all restraint – they're already falling upon our allies. It's time to give them a reproach, or else Syria will be next."[37] That the shock had set a dangerous precedent was evident but, once again, primarily regional in context. In the words of one former official in the Ministry of Foreign Affairs, the attack had ensured that "one thing was clear to Moscow: nuclear capability had now been brought into the Middle East conflict."[38] Concerns for the credibility or effectiveness of the nonproliferation regime were outweighed by those which emphasised the instability of the region.

In addition, and to return briefly to the French understanding of the danger, there was a defensiveness (similar to that in the IAEA) regarding the fact that French nuclear supply standards were being again questioned. It was this implicit attack on France's credibility, rather than the dishonest intentions of a non-nuclear state or concern over self-appointed counterproliferation, which appeared to form the basis of the French understanding of the danger. The Foreign Minister, Claude Cheysson, was quick to point out that Iraq was a member of the IAEA as well as a non-nuclear signatory of the NPT. One journal quoted a French source as dismissing the outcry and asserting that "this reactor is extremely poorly adapted to the regular production

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[37] Grinevsky, *The Atomic Bomb and the Middle East*, (for Russian text, see Chapter 4, footnote 18). Grinevsky also discussed Andropov's concern, following the attack, that the Israeli action was "a prelude, an experimental step to a military action in Lebanon or against Syria." (The text states: "то военным акциям в Ливане или против Сирии.")

[38] Ibid.

of plutonium."[39] The United States, on the other hand, was accused in a newspaper editorial of indulging the Israelis and overreacting to a non-existent Iraqi threat. Instead of chastising Israel for its destabilising action, the US was claimed to be fixated on "the bloodthirsty regime of Saddam Hussein and expresses the greatest contempt for an irresponsible and mercenary France."[40] For the French, the problems raised appeared to have come about as a consequence of the unwarranted panic on the part of the American Congress. This perceived hysteria manifested itself not only in attacks on the IAEA but also in attacks on French safeguards and integrity. Any fear for the credibility of the safeguards system, or the nonproliferation regime, so far as the French were concerned, had been conjured up from needless anxieties.

Conclusions regarding the understanding of danger

While the bombing of Osiraq prompted a great deal of concern, it failed to generate a consensus on the grounds for such concern. Outside the American Congress there was a general belief firstly, that the credibility of the regime had been unjustly undermined and secondly, that this thereby masked the real basis of the problem, which was regional. France and, especially, the IAEA interpreted any danger to the credibility of the regime as having been created by Israel's style of unilateral counterproliferation and the unjustified acceptance – in the American Congress – of its reasons for doing so. In emphasising the damage done to safeguards credibility by such counterproliferation, neither France nor the IAEA appeared to be overly concerned about the intentions of Iraq or the possibility that the signing on as a non-nuclear member of the NPT was not necessarily a guarantor of pure intentions.

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[39] Rob Lanfer, "IAEA's Role Seen as Undiminished Despite Israeli Action," *Nucleonics Week*, vol.22, no.23, 11 June 1981, p.2.

Furthermore, of course, there was the ambiguity of the evidence for Iraqi proliferation. Without direct and strong evidence of military intention, it was hard to build a consensus around the existence and extent of damage to the regime and the need for change. Rather, the danger was viewed as having been created by Israel's unnecessary action and the utterly uncalled for hand-wringing that followed, particularly in parts of the United States government.

The unwillingness to accept that the shock had implications beyond regional tensions or had justifiably called safeguards into question thus boded ill for the possibility of significant regime change eventually being enacted. Nor were the parties affected by the shock inclined to be persuaded of the view broadly adopted in Congress, having already decided on (and evidently decided to stick to) the 'correct' understanding of the danger posed by the event. The increasing "suspicions about the administration's insensitivity to congressional concerns"[41] reflected the division between the Congressional interpretation of the danger as being to the regime, and the interpretation of the danger by the American (and Soviet) governments as unnecessarily undermining the credibility of the safeguards system but primarily as reflecting the problems of the Middle East and heightening the insecurity of the region. The end result stood in contrast to the consensus which had eventually been reached both within and outside the US following the Indian test. The time following the bombing of Osiraq revealed a unresolved conflict between those who understood the shock as having undermined the regime by revealing genuine problems and those who understood the shock as having undermined the regime by raising unnecessary questions which, especially in the eyes of the Reagan Administration, detracted from the 'real' issue of regional conflict.

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[40] *Le Monde,* 12 June 1981. (American opinion was fixated on "le régime sanguinaire de Saddam

Understanding of Responsibility:

With the disagreements that existed regarding the nature and extent of the dangers raised, the reaction to the Osiraq shock began to differ from that which followed the Indian test. This was not the sole reason for the inaction that followed, although the lack of consensus certainly helped to bring about the eventual stalemate. However, the lack of acceptance of responsibility for leading regime change – one which was so strongly evident following the Indian test – was also absent in the aftermath of this later shock.

The rhetoric of responsibility which, in the United States, surrounded the Indian test was linked consistently with the calls for an initiative to be taken towards regime change. In the Indian case, the actor who instigated, and even pressured through, change to the regime was also the actor which felt responsible for taking action. However, following the attack on Osriaq, the understanding of the responsibility for leading change instead veered rather narrowly between a belief (in the American Congress) that someone should do something, and an equally determined belief elsewhere that no one need do anything.

The United States

Beginning again with the United States, and specifically with the Congress, the differences between the rhetoric of the Indian test and the Osiraq bombing are apparent. This discrepancy occurred despite the initial similarities between both cases with respect to the fear that the shock had endangered the regime and revealed weaknesses which required change. In the case of Osiraq, the attempts at consciousness-raising were not accompanied by expressions of responsibility for

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Hussein, et exprimer le plus profond mépris pour une France irresponsible et mercantile.")

bringing about change to the regime. This is not to ignore the fact that anxiety was expressed about the seeming nebulousness of the Administration's nonproliferation policy. For example, shortly after the attack Representative Hart charged the Reagan Administration with "responsibility for sending the wrong signals to the world about US commitment to nonproliferation."[42] Senator Glenn, as was noted previously, expressed his confusion over, as he put it, "what the nonproliferation policy of this administration is."[43] Nonetheless, while such criticism certainly indicates some sense of American responsibility for supporting nuclear nonproliferation and the nonproliferation regime, it differs in an important way from the Indian case. Not only was the sense of responsibility relatively mild in its expression, no causal connection was made between American policy and the events in Iraq.[44] There was no demonstration of a belief that a failure on the part of the United States had contributed to the circumstances leading to the shock; no reference to the event itself was made even in those statements which brought up question of responsibility generally. Such sentiments as existed tended to cite the event as highlighting the need for a concrete nonproliferation policy which would provide a kind of template on how to react to such things.

In addition, the questions which arose regarding the efficacy of IAEA safeguards further appeared to dilute the connection between the United States and the

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[41] Beckman, *Nuclear Non-Proliferation,* p.376.

[42] Representative Hart, as quoted in the Congressional Record, Tuesday 16 June 1981 (Proceedings and Debates of the Ninety-Seventh Congress, first session, 12449)

[43] *The Israeli Air Strike,* p.46.

[44] The four Congressional hearings which dealt with the bombing appear to contain no expression of a belief that the issues raised had been brought about, at least in part, by American inattention or mishandling of the situation (see *International Atomic Energy Agency (IAEA): Improving Safeguards; Israeli Attack on Iraqi Nuclear Facilities; IAEA Programs of Safeguards; The Israeli Air Strike*). This, of course, contrasts with the prevalent sense, following the Indian test, that the lack of attention devoted to such matters had paved the way for India both to acquire and test its nuclear capability.

Osiraq shock. Given the obvious mistrust of Iraq's nuclear intentions, and given an underlying conviction that Israel had done the world a favour, this is hardly surprising. If Israel was justified in attacking Osiraq – if it indeed "did the only thing a country could do"[45] – the obvious implication was that Iraq was intending to abrogate its NPT commitments. Not having been a supplier state to Iraq (being, in fact, diplomatically estranged from it) the United States was able easily to divest itself of responsibility for the problems revealed and created by the shock.[46] The Congressional understanding of American liability for creating the circumstances which brought about the shock therefore fell on those actors directly responsible for preventing it: the supplier (France) and, particularly, the IAEA.[47]

Despite a clear sense that the United States had not been the architect of the shock, there was nonetheless a lingering sense, within Congress, of responsibility for bringing about change to what were seen to be deficient IAEA safeguards. While calls for American leadership were less strident that in the case of the Indian test, suggestions persisted that the United States must initiate much-needed change in the IAEA. Opinions were voiced that "there is presently no basis for public confidence in agency safeguards...[and that] the IAEA, unless we strengthen it, must negotiate with

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[45] Ibid., p.148 (speaker: Senator Pressler). Similar sentiments, such as Representative Lantos' declaration that "the surrounded and beleaguered Israelis did exactly what we would do in our part of the world should the occasion arise" (Congressional Record, March 24, 1982) and Representative Bingham's statement that "Israel had every reason to be alarmed by Iraq's nuclear progress" in *Israeli Air Strike*, p.185, led the Committee on Foreign Affairs itself to admit, as noted earlier, that such beliefs were "a common theme" in Congress *(Congress and Foreign Policy, 1981*, p.98) and even fretted that such admiration was able to "override the self-defense and nonproliferation questions" (Ibid., p.98).

[46] This was an opportunity which, in the case of the Indian test, had been prevented by the growing awareness of the American role in the Indian nuclear programme.

[47] As has been detailed, criticism of the ability of the IAEA to thwart nuclear ambitions began from the first hearings on the subject and gave rise to Senate and House of Representatives hearings specifically on the utility and effectiveness of the IAEA (see *The International Atomic Energy Agency (IAEA): Improving Safeguards* and *IAEA Programs of Safeguards*).

each host country what it will be shown and when it will see it."[48] In addition, hearings in the House of Representatives put forward the idea that the United States should reconvene the Nuclear Suppliers Group once more.[49] Such suggestions, as well as demonstrating a desire for the United States to lead change, are clearly reflective of concerns regarding nuclear supplies and the policies of nuclear suppliers (in the case of Osiraq: France).[50]

However tentatively suggestions of US leadership were voiced, they ran into firm opposition from the State Department and Administration. The official State Department response to suggestions of a reconvened Nuclear Suppliers Group was rejected on the grounds that such an initiative would simply serve to

> rekindle the resentment and opposition of many developing nations...We believe that former NSG members themselves would be reluctant to embark on another highly visible, formal attempt to control further their nuclear exports.[51]

Given that concern in the executive tended to emphasise the regional context of the shock, this lack of will to initiate regime change is unsurprising. In addition, the Director of the ACDA claimed that "unilateral American attempts to impose our views on other states encourage the spread of reprocessing facilities and weaken the possibility of achieving cooperative solutions for the problem."[52]

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[48] *The Israeli Air Strike,* p.22.

[49] *The International Atomic Energy Agency: Improving Safeguards,* pp. 147 & 219. The proposal to reconvene the NSG was originally put forward, not surprisingly, by Senator Glenn in the June 1981 *Israeli Air Strike* hearings, p.177.

[50] Representative Lantos, who had argued in favour of Israel's action as self-defence, also called upon the administration "to take immediate and effective action to remind our European friends to stop their ill-conceived propagation of nuclear weapons." (from the Congressional Record, March 24, 1981). The testimony of John Moore, the Professor of Law and Director of the Center for Law and National Security at the University of Virginia. Moore, a former Department of State official, said that France shares a greater portion of the responsibility for this than it has yet received in the overall public assessment." *Israeli Air Strike,* p.250

[51] *The International Atomic Energy Agency: Improving Safeguards,* p.219.

[52] Ibid., p.147.

In conclusion, the Reagan Administration showed no great longing to lead the charge into an arena which it considered to be external to the problem at hand. Congressional carryings-on over the perceived inadequacy of the IAEA were felt to be unwarranted and misdirected. As one official recalled: "the US Administration did not want the US Congress to take actions that would have damaged the IAEA safeguards system, and hence it did what it could to defend the efficacy of the safeguards."[53] The understanding of the responsibility for bringing about regime change, like the understanding of the danger posed by the event, failed to generate a consensus.

The IAEA

The sense of obligation for initiating change was even less apparent in the IAEA. As was made clear in the discussion of the initial IAEA reaction to the shock, the understanding of the danger was not of one posed by Iraq, but of one created solely by the Israelis and the subsequent (over)reaction of others to the event. One would thus not expect to find a sense of responsibility for rectifying a problem which is not considered to exist. Indeed, the attack appears to have hardened the view that neither the IAEA safeguards in use, nor the ones that the Agency intended to apply to Iraq in the future, would allow diversion to go undetected even in the event of Iraqi non-compliance. The IAEA Board of Governors and Department of Safeguards felt no duty to instigate change to the safeguards aspect of the nonproliferation regime as a response to the questions raised by the attack on Osiraq.

[53] Interview with Fred McGoldrick, 30 June 2000.

The first indication that the Agency placed liability for the problems squarely on Israel and not on its own safeguards was evident in Director General Eklund's address to the UN Security Council, in which he asserted that

> in fulfilling its responsibilities, the Agency has inspected the Iraqi reactors and has not found evidence of any activity not in accordance with the Non-Proliferation Treaty. Nevertheless, a non-NPT country has evidently not felt assured by our findings and by our ability to continue to discharge our safeguarding responsibilities effectively.[54]

On July 6th, two and a half weeks after this statement, Eklund again addressed the IAEA Board of Governors and informed them that the IAEA carried no responsibility for the circumstances leading up to the attack, given that "there was thus nothing wrong with the safeguards being applied on the Tamuz reactors nor any deficiencies in the inspection schedule or procedures."[55] This was supported in print on two occasions by the Deputy Director General of the Department of Safeguards (H. Gruemm) who claimed that potential diversion scenarios had been applied to Iraq and found not to be credible. In fact, Gruemm argued, "it is to be doubted that the effectiveness of IAEA safeguards is really the weak link in this interaction."[56] Going still further, he claimed that the IAEA was a strictly technical organisation and that "nonproliferation is not really a technical, but a political problem."[57] The issues of nuclear proliferation, it therefore follows, were not the IAEA's responsibility.

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[54] Address to the United Nations Security Council by IAEA Director General Eklund, 19 June 1981, [extract] in *Peaceful Nuclear Development Must Continue,* p.4.

[55] Address to the IAEA Board of Governors by Director General Eklund, 6 July 1981, [extract] in Ibid., p.6.

[56] H. Gruemm "Potential and limitations of International Safeguards," in IAEA Bulletin Supplement 1982, p.43. Gruemm also attacked the media's ignorance for putting IAEA safeguards in a bad light, in an article immediately following the shock, entitled "Safeguards and Tamuz: Setting the Record Straight," *IAEA Bulletin*, vol.23, no.4. He continued to deny IAEA responsibility in "Safeguards verification – its credibility and the diversion hypothesis," *IAEA Bulletin*, vol.25, no.4, December 1983.

[57] H. Gruemm "Potential and limitations of International Safeguards," p.40.

In 1983, the Director of the Division of External Relations continued to refute the idea of an ineffectual IAEA as having "forced" Israel into the attack, noting that "the Israeli raid has resulted in wide public debate on IAEA safeguards but, almost ironically, safeguards were not put to the test in that case."[58] He went on to claim confidently that the various methods suggested for the Iraqis to divert fuel would be untenable, stating that "any attempt to use such a diversion strategy would have been easily detected by IAEA safeguards."[59]

The Agency therefore felt no responsibility to initiate change in its own practices. Instead, the IAEA considered that it had a responsibility to *prevent* calls for drastic change to the safeguards system – such as those coming from Israel and certain parts of the United States – from coming to pass. This was particularly evident in the concern over the perceived danger to the place of the IAEA as a guardian of the right to peaceful nuclear development as well as nonproliferation.[60] This found expression in a desire to prevent perceived attempts to alter the established norm of peaceful nuclear assistance. Change to the regime, in the eyes of the IAEA bureaucracy, was not considered something to seek, but something to avert.

France and the USSR

France likewise evidenced no belief that it had been deficient in their dealings with Iraq and thus "forced" Israel into a pre-emptive strike. The Foreign Minister, M. Bernard Pons was quoted as affirming that France had supplied Iraq with a research

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[58] Christopher Herzig, "Correspondence: IAEA Safeguards," *International Security*, vol.7, no.4, Spring 1983, p.195.

[59] Ibid., p.195.

[60] The Director General's concern, expressed in his address to the Board, was that "following the Baghdad incident, there may be renewed attempts to impose new restrictions and constraints on certain areas of peaceful nuclear technology." (in "Peaceful Nuclear Development Must Continue," p.6.)

reactor and taken precautions against its ever being put to military use.[61] Israel – not France – was viewed as bearing primary responsibility for problems raised by the shock by indulging in an unnecessary attack. This, at least, was the impression created at the time. As one article headline announced: "Angry French Contend Osirak Couldn't Have Served Weapons Purpose."[62] Another quoted a French source as saying that "the reactor is extremely poorly adapted to the regular production of plutonium."[63] Publicly, at least, the French government remained unwilling to admit that its nuclear relations with Iraq were problematic. As the previous chapter demonstrated, however, concerns regarding Iraqi intentions ultimately motivated France to push the Iraqis towards less proliferation-prone fuel, and to prevent them from rebuilding the Iraqi reactor, despite declarations of the unassailability and comprehensiveness of French standards of supply.[64] Such actions displayed an apparent mistrust of Iraq, despite official reaction.

There is, however, no evidence of a concerted attempt by the French government to take the lead to correct any such problems, or initiate a change in aspects of the regime dealing with such matters. The evident irritation over having its nuclear supply standards yet again exposed to the international spotlight provoked this kind of defensive response. Having so vociferously denied any impropriety, it

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[61] M. Pons stated that "le gouvernement français, en livrant à l'Irak un réacteur de recherches, avait puis toutes dispositions pour que celui-ci ne puisse être détourné à des fins militaires." (*Le Monde,* 9 Juin 1981). M. Pons was also quick to note that Iraq's nuclear programme was also under the control of the IAEA. ("De plus, cette activité de recherches était soumise au contrôle permanent de l'Agence international de Vienne" in *Le Monde,* 9 juin 1981).

[62] *Nucleonics Week,* vol.22, no.24, 18 June 1981, p.3.

[63] *Nucleonics Week,* vol.22, no.23, 11 June 1981, p.2.

[64] *Le Monde,* 11 June 1981. The Quai d'Orsay statement on the attack proclaimed that "le president de la République a lui-même insisté sur la nécessité de prendre les mesures indispensables pour guarantir l'utilisation de ces installations (de Tamuz) à des fins pacifiques." ("The President of the Republic, at the same time, insisted on the necessity of taking certain crucial measures to guarantee the use of the reactor (Tamuz) for peaceful purposes.")

became difficult to accept responsibility for leading change to the safeguards and supply standards which were not seen to be in need of revision.

Although the Soviet Union was the first state to embark on nuclear cooperation with Iraq, care had been taken not to provide it with technology or equipment that could be used to military ends. As the previous chapter pointed out, Soviet insistence on the application of IAEA safeguards inclined Iraq towards seeking French assistance in the mid-1970's. Given such indications of concern over Iraqi intent, and having played no part in the development of the doomed Osiraq reactor (and given, of course, that the attack was apparently viewed in a regional context), it is hardly surprising that that Soviet Union was reluctant to lead changes to the nonproliferation regime. Indeed, it was recorded that the Soviet Prime Minister Tikonov was asked by the Iraqis, following the bombing, for help in nuclear areas, and that, "understanding the delicacy of this issue, and lacking a firm position, [he] evaded answering."[65]

Conclusions regarding the understanding of responsibility

This examination of the sense of responsibility for leading regime change reveals significant differences in how the bombing of Osiraq and the 1974 Indian nuclear test were understood. In the United States, the diverging opinions of the Congress and the State Department and Administration were once again important. General agreement existed, in contrast to six years earlier, that the United States bore no direct responsibility for the circumstances leading to the shock. Congressional opinion, however, still suggested that the United States must again play a leading role in changing the regime and fixed upon the IAEA as the institution in need of

salvation. This time, however, the State Department and Administration did not share this assessment and indicated that, given the unjustified criticism of the regime which was obscuring the 'real' issue of the Middle East, there was no obligation on the part of the United States to stir up the hornet's nest that calls for change would produce. The IAEA, for its part, denied any flaws in either the safeguards applied to Osiraq or those that were to have been applied after the reactor became operational. In addition, the Board of Governors and Department of Safeguards apparently felt a greater responsibility to avert change to the safeguards than encourage it, fearing an attack on the norm of peaceful nuclear assistance.[66] The USSR, which shared the view of the Reagan Administration that the bombing was symptomatic of regional problems and which had taken care in the past not to supply Iraq with militarily useful technology, likewise saw no need to lead regime change. Finally, evidence of previous French concern regarding Iraq – and the subsequent failure to rebuild the reactor in question – points to some sense of liability for bringing about the Israeli attack. At the same time, annoyance at being the focus of attention yet again for their nuclear supply policy led into the kind of stringent denials of wrong-doing which undermined the possibility of France calling for or leading change to the regime even had the desire to do so been sufficiently strong. The French government considered itself already to have taken the necessary steps to prevent any Iraqi proliferation and that, combined with the strident denials of carelessness, mitigated against a French acceptance of the need to be at the forefront of change to the regime.

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[65] Grinevsky, "The Atomic Bomb and the Middle East," (the Russian text states: "Понимая всю деликатность этой темы и не имея чёткой позиции, Тихонов укпонился от ответа.").

[66] This norm was one which was not just enshrined in the IAEA, but at the heart of the regime in Article IV of the NPT, which spoke of the "inalienable right of all Parties to the Treaty to develop

Understanding of Immediacy:

The United States

However much it upset notions of how accused proliferators were to be dealt with, the shock of the Osiraq incident can already be seen to have been interpreted quite differently from the Indian test. The fact that Israel's fears regarding Iraq's intentions could be neither definitively proven nor discounted did not help matters. The preceding sections point also to an understanding in the IAEA , USSR, and France that the hazard to the regime was one which had been created by Israel and the subsequent overreaction to her claims in, for example, the American Congress. The United States government, which had almost single-handedly been the architect of the regime change following the Indian test, did not ultimately come to accept Congressional interpretations of the need to initiate regime change.

In the case of India, these interpretations of the shock existed alongside the belief that regime change could not be postponed. No other concerns were seen to obviate the need for regime change and the issue of nuclear nonproliferation generally. Such beliefs, however, were absent in the case of the Osiraq incident, particularly (and crucially) in the United States and revealed yet another discrepancy between the priorities of the Congress and the State Department. As one author observed in the wake of the bombing: "the issue is simply how important nonproliferation is compared to other issues."[67] Following the bombing of Osiraq, it became clear that nonproliferation – and thus the need for immediate action – came a long way down the list of priorities. Not only were the issues raised by the Osiraq incident not perceived as requiring immediate action, but there appears to have been a

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research, production and use of nuclear energy for peaceful purposes" (Article IV., para.1 of *Treaty on the Non-Proliferation of Nuclear Weapons*).

conviction that several competing interests took primacy over nuclear nonproliferation. This conviction appears to have been especially entrenched in the Reagan Administration which, as one author noted at the time, began from a premise that "competing US national interest must often take precedence over efforts to halt proliferation."[68]

Such an assessment was assisted by the lack of what has was described, in the discussion of the Indian test, as a "reinforcement".[69] After the Indian test, the sense that the time to act was running out was brought about primarily by the French/Pakistani and West German/Brazilian deals, and the resulting sense that the Pandora's box India had opened was rapidly emptying. No equivalent 'after-shocks' existed in the Osiraq case. The Israeli attack was not imitated, nor was a non-nuclear NPT country proven to have been breaking its treaty obligations. On this occasion, the initial fears in Congress that the shock had damaged the regime by setting a dangerous precedent were not reinforced by subsequent events. This is not to argue that the absence of a reinforcing event was sufficient, or even necessary, for creating a sense of time running out. However, given the fact that such an occurrence had, six years earlier, proved helpful in creating a need for action, its absence following the Osiraq shock may assist in understanding why change to the nonproliferation regime was not seen as requiring immediate attention.

Several other considerations may also have played a part in persuading the American government that the shock did not require immediate action and that other interests were more pressing than nuclear nonproliferation. Not least among these was the desire of the new Administration to break with the policy of 'nuclear denial',

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[67] Richard K. Betts, "Nuclear Proliferation after Osirak," *Arms Control Today,* vol.11, no.7, September 1981, p.8.

[68] Feldman "The Bombing of Osiraq – Revisited," p.132.

which had characterised Carter's approach to nonproliferation, and to re-launch the United States as a competitive nuclear supplier.

The first statement by the Reagan Administration on American nuclear nonproliferation policy made clear the intention to break with that of Carter.[70] These intentions were underscored by an official State Department response to questions in the House of Representatives regarding the American response to the events like Osiraq. The new administration, it said, intended to hold a review

> focused on approaches for a more predictable policy for exercising US rights to approve reprocessing and use of plutonium subject to US control under our peaceful nuclear cooperation agreements.[71]

Earlier in the same hearings, the Director of the ACDA had also articulated this new direction in nuclear policy when he declared the need to recognise "that such activities [civil reprocessing and breeder reactor development] in the stable industrial democracies simply do not in themselves present a proliferation risk."[72] The antiproliferation, denial policies of Carter had clearly come to an end.[73]

This new turn was an important demonstration of the reprioritisation of American nuclear policy. It was impossible both to carry on the denial policies of the

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[69] See Chapter 3 of this text, pp.107-9.

[70] This statement, it will be recalled, announced the need to "reestablish this Nation as a predictable and reliable partner for peaceful nuclear cooperation under adequate safeguards." (Statement on United States Nuclear Nonproliferation Policy," 16 July 1981, reprinted in *Public Papers of the Presidents of the United States – Ronald Reagan,* p.630.) The Administration's intentions were reiterated to the IAEA eight months later by the American Representative, who claimed that "this Administration intends to take a positive attitude toward, and foster increased domestic reliance on, nuclear power...We seek, for example, to lessen the regulatory impediments which have contributed to the reluctance of utilities to purchase new power plants." (Statement by US Permanent Representative (Kennedy) to the International Atomic Energy Agency: US Nuclear Energy Policy, March 22, 1982 in *Documents on Disarmament, 1982,* US ACDA, p.160-61).

[71] *The International Atomic Energy Agency (IAEA): Improving Safeguards,* p.231.

[72] Statement of Hon. Eugene V. Rostow, in Ibid., p.147.

Carter Administration and, as was desired, to re-establish America's position in nuclear commerce. As one journal put it, the new Administration found itself obliged to "attempt to reconcile [the] goals of opposing the spread of nuclear weapons and promoting the use of nuclear power."[74] The unwillingness in the State Department and Administration to reconvene the NSG or further restrict nuclear commerce, is indicative of this new preference. The fact that the shock, in the end, inspired no flurry of activity on the part of the US underscores the suggestion that nonproliferation concerns lost out to, among other things, the resuscitation of nuclear trade.

The increased focus on the relaxation of the rules governing American nuclear trade was not the only issue which served to push concern over the nonproliferation regime farther down the list of those things which required immediate attention. The Cold War had, after a slight thawing in relations between the US and USSR, chilled considerably. Indeed, 1980 was described in the annual review of one political journal as having "represented the lowest point in Soviet-American relations in over a decade."[75] The greatest nuclear threat once more stemmed from the possibility of hostilities between the two superpowers. The fears, in the previous decade, of a world of many nuclear powers had been subsumed by the aggressive rhetoric and vertical nuclear proliferation which characterised US/USSR relations.

The question of a NPT state's possible intentions to construct a nuclear bomb or two, indeed the question of the structure and overall health of the nonproliferation regime, seemed of secondary importance as a consequence. What was understood by

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[73] Not surprisingly, this did not please the old guard of nonproliferation campaigners in Congress, Senator Glenn, in particular, disparaged the Administration's relaxation of policy and, as was noted earlier, the incoherence (in Senator Glenn's eyes) of its nonproliferation policy.

[74] *The Wall Street Journal*, 17 July 1981.

the Administration to be of immediate importance in the Middle East was superpower relations and Israel's security. Reagan, for his part, cited his Administration's goals in the Middle East as "trying to reduce instability...which we saw as an invitation to Soviet tampering."[76] Even in Congress, voices were raised identifying the Cold War as much more important than anything raised by the Osiraq incident. One Congressman expressed his concern that

> today, as many are mesmerized over the destruction of the nuclear capability of the radical and irresponsible regime in Iraq, the Soviet Union is again poised on the brink of crushing the budding independence of Poland...We as Members of Congress have a supreme obligation to the American people to focus on the dangerous Soviet fall game and not become distracted by the momentary sideshow in the Middle East.[77]

The heightening of Cold War tensions supported the assessment that the most immediate source of concern was not Iraq, the IAEA, or the nonproliferation regime, but rather the Soviet Union. Insofar as nuclear weapons were concerned, superpower conflict outranked the as-yet unsubstantiated ambitions of Iraq, and the prevention of horizontal proliferation in the face of ever-spiralling vertical proliferation was pushed still farther down the list of American priorities.

It was American relations with Iraq which provide further assistance in understanding the outcome of the shock. Iraq, simply put, was perceived to be more useful than damaging to American interests. The fear that the time for action was rapidly expiring was not only unchallenged by the occurrence of a similar event, but was inherent in outcome of the shock itself. "As far as Iraq was concerned," one former State Department official recalled "we viewed it as a long-term proliferation

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[75] *Strategic Survey 1981-1982*, p.29.

[76] Reagan, *An American Life*, p.504.

threat anyway, and the Israeli attack had pushed that threat even further into the future."[78] Not only was the need for action not pressing, but the shock was even perceived to have bought valuable time.

Good relations with Iraq, however, could be of immediate benefit. As one witness testified to the Senate:

> [Iraq] is a potential trading partner of enormous value to the United States. Actions which would tend to discourage efforts to achieve an opening to the West, and which would push Iraq back toward the embrace of the waiting Soviet bear, are not in the national interest.[79]

Such a statement echoes the Administration's desire, cited earlier, that the Soviet Union be prevented from gaining too strong a foothold in the Middle East. Following the successful revolution in Iran, and the resulting hostilities between Iran and the US, Iraq's usefulness increased. The United States in 1981, it was claimed, wanted "a regional ally that could replace Iran in America's strategic network."[80] The fact that at the time of the shock, the Iran-Iraq war was going badly for Iraq, further contributed to the belief in the immediate need not to delve too deeply into Iraq's nuclear intentions (the threat of which, as stated earlier, had become a long-term consideration). In the shorter-term, an Iranian victory was distinctly undesirable. "The last thing Washington wanted to see", it has been contended, "was

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[77] Tom Lantos, quoted in the Congressional Record, 11 June 1981 reprinted in *The Israeli Air Strike*, p.202.

[78] Fred McGoldrick, interview via e-mail, 30 June 2000. It should be noted, however, that the notion of regime inaction as a consequence of Iraq's more immediate perceived use is one which is contested by McGoldrick, for one.

[79] Prepared Statement of Joseph J. Malone (President, Middle East Research Associates Inc.) in *The Israeli Air Strike*, p.268.

[80] Feldman "The Bombing of Osiraq – Revisited," p.129. Feldman goes on to claim that the American condemnation of Israel following the attack was done with this in mind: "if the 'Iraqi Option' were to be kept alive, the United States could not help but make its disapproval of Israel's action explicit." (p.129).

a victorious Iran spreading fundamentalist revolution into the Arab heartland."[81] Certainly Reagan's own estimation of a powerful Iran was one of concern:

> the sudden emergence of fanatic Islamic fundamentalism as a political force in the Middle East was a development that would have posed a difficult challenge to any Western leader concerned without strategic interests there.[82]

Iraq, in short, was revealing itself to be amenable to American interests precisely at the time Israel attacked the Osiraq reactor, and precisely at the time that interest in the nuclear nonproliferation regime was sliding down the list of priorities.

The belief that Iraq was of more immediate use as, if not an ally, exactly, then not an enemy was one which appeared to win the day. Nuclear proliferation, particularly unconfirmed accusations of it, was not calculated to be an issue of any great urgency. That such an assessment was made is reflected in the warming of relations between Iraq and the US which occurred in the years following the attack. The New York Times reported in November 1982 – during the American withdrawal from the IAEA to protest the perceived ill-treatment of Israel – the simultaneous growing relationship with Iraq, observing that "the United States, although it still does not have full diplomatic relations with President Saddam Hussein's government, appears to be winning respect and a measure of influence."[83] More noteworthy still is a staff report by the Senate Foreign Relations Committee, which declared that "the United States has undertaken a number of steps to shore up Iraq and to forestall an Iranian victory."[84]

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[81] Kenneth R. Timmerman, *The Death Lobby,* (London: Fourth Estate; 1982), p.125.

[82] Reagan, *An American Life,* p.218.

[83] *The New York Times,* 22 November, 1982. On November 27th, 1984, the newspaper reported the restoration of full ties with Iraq, noting that such an event "underscored the improving ties of recent years between Washington and Baghdad." This trend continued and was observed in an article titled: "Iraq is Improving Links to Both US and Soviet Union." (See *The New York Times,* 29 March 1984.)

The IAEA, France and USSR

Turning briefly to the remaining actors, there was little inclination to embark on immediate action. This is unsurprising in the light of the apparently unanimous, and strident, public repudiation of the Israeli accusations as well as a responsibility for creating the problem or bringing about change. The IAEA's belief in its obligation to *prevent* change ran counter to a desire for immediate action and in favour of immediate inaction. The fact that IAEA publications, statements and behaviour in response to the Osiraq incident reveal no sense of time running out or an urgent need for change reflects this.[85] The French and Soviet governments, for their parts, gave no indication of a desire for immediate corrective action. Despite any lingering sense of concern regarding Iraq's intentions, the prevailing sense that France was again subject to unwarranted overreaction in some circles mitigated against a desire for immediate action to be taken to change the regime. The Soviet Union appeared to share the Reagan Administration's belief that regional and Cold War politics were more urgent.

Conclusions regarding the understanding of immediacy

The attack on the Osiraq reactor did not result in a sense that change to the regime must be implemented before the opportunity passed. The prevailing belief, that if a danger of Iraqi proliferation had existed it had been ended for the time being

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[84] *War in the Gulf,* A Staff Report Prepared for the Committee on Foreign Relations, United States Senate, August 1984. Quoted in Timmerman, *The Death Lobby,* p.125.

[85] In IAEA Bulletins, please see H. Gruemm "Safeguards verification – its credibility and the diversion hypothesis"; L.W. Herron "A lawyer's view of safeguards and non-proliferation" (vol.24, no.3, Sept. 1982); H. Gruemm "Potential and limitations of international safeguards"; H. Gruemm "Safeguards and Tamuz: setting the record straight"; "Peaceful nuclear development must continue." Also see Herzig "Correspondence: IAEA Safeguards".

by Israel's attack, remained unchallenged by subsequent events. Moreover, the concern which had been raised in the American Congress – having no parallel to the West German and French nuclear supply agreements which had followed from the Indian test – went unsupported by further evidence. In the meantime, the nuclear nonproliferation regime, and issues of nuclear nonproliferation generally, were relegated to relative unimportance. The desire to re-establish the US as a nuclear supplier, the increase of Cold War and Middle East tensions, and the potential benefits of befriending Iraq all worked against the desire to propel a conflicting interest such as the nuclear nonproliferation regime, to the forefront of immediate concerns. The IAEA, concerned with preventing change to the safeguard aspect of the regime rather than fostering it, was therefore hardly inclined towards taking action, immediate or otherwise. The USSR, much like the Reagan Administration, appeared to see the question of balance in the region as outweighing regime issues. France, of course, had charged Israel with creating the threat, not Iraq (and by extension itself). The conviction that French supply standards were more than adequate was incompatible with a belief that action to alter further the supply and safeguards aspect of the regime was needed.

Understanding of Solvability:

The above discussion regarding the interpretation of the Osiraq shock among those actors directly involved has revealed a broad reluctance to instigate change in the nonproliferation regime. Conclusions to this end were formed by differing assessments of the danger posed, responsibility held, and immediacy required and all appear ultimately to have worked against a consensus for change. The same characterised interpretations of the solvability of any dangers raised by the shock.

The questions raised by the Osiraq shock centred primarily on the efficacy of IAEA safeguards and whether or not they were capable of detecting a potential diversion of nuclear material to military ends. However, a clear view of how such deficiences might be addressed did not emerge in the aftermath of the shock. This was even true in the American Congress, which evidenced the greatest concern over apparent flaws in the safeguards system. More importantly, still, the antipathy of the United States Administration and the IAEA to such changes meant that the possible ways by which to strengthen or reform safeguards were not examined. Such an examination (which could only lead to change if undertaken by governments and the IAEA), undermined the chances of Congressional concerns being heeded. The determination by the US government and the IAEA that there were no safeguards problems which required resolution foiled the chances of this type of regime change. The eventual metamorphosis of the Osiraq incident into a showdown between the IAEA General Conference and the United States cemented the improbability of any solutions being found and implemented.

Insofar as nuclear trade was concerned, change to this part of the regime was equally implausible. It was only in Congress that any will at all has been shown to have existed regarding the need to re-invigorate the NSG. Such a suggestion was rejected the the State Department and Administration, while France reacted defensively to accusations of lax trading standards, giving no indication of a willingness to be dragged into such talks yet again. The absence of the USSR and its Eastern bloc allies from the eventual NSG meeting indicated that these states held a similar view on the utility of such talks.

More to the point, while suggestions were made regarding a reconvening of the NSG, there were no concrete suggestions – even in Congress – of a need for

changes in the rules of the NSG. The Guidelines which had been agreed in the wake of the 1974 Indian test were considered to be suffcient when applied by the member states. It was thus the implementation of the NSG, rather than regime change, which was considered to be a solution to the problems raised. France's eventual refusal – in spite of its protestations – to supply Iraq with a second reactor indicated that the agreed-upon Guidelines were increasingly being honoured by all members of the NSG.

Conclusions:

Despite the unprecedented nature of the Israeli attack, and the fact that the shock clearly raised serious questions about the effectiveness of the non-proliferation regime, the incident had no lasting effect. The attack on the Osiraq reactor aroused serious concerns amongst the relevant actors regarding the possibility of imitation and the damage done to the safeguards system. Certainly there was a shared concern that the bombing of Osiraq had undermined the credibility of the nonproliferation regime by setting a precedent for unilateral, self-appointed counterproliferation.

However, the ambiguity of the shock – the fact that Iraqi ambitions could not be proven and that Iraq had not breached any safeguards obligations – made it difficult to come to a consensus over the danger posed. In this it differed sharply from the Indian test of 1974. Firstly, of course, the explosion of a nuclear device was uncontestable. India's claim that it was a peaceful explosion and that it had not breached any trade undertakings were rejected by the United States and its allies. Further claims by France and West Germany that the explosion had not revealed deficiencies in the trade regime were also rejected. This allowed for a clear

interpretation of the event which contrasted with the lack of clarity surrounding the bombing of Osiraq and what it implied.

It was only in the American Congress that the safeguards and verification aspects of the regime were considered to be so compromised by the event as to justify regime change. The Reagan Administration, State Department and the Soviet government considered any damage to the regime to be much less important than that done to the stability of the Middle East and the peace process. The IAEA and French government reacted defensively to suggestions of ineffectual standards of safeguards and supply and, much like the Reagan Administration, considered the greatest danger to the regime to stem from Congressional over-reaction to the Israeli accusations.

In the United States, which had taken the initiative in favour of regime change six years earlier, differences in interpretation between the Congress and the State Department/Administration also prevented the kind of unity that had been so vital for the creation of the NSG. The American Congress found itself unable to persuade the rest of government of the validity of its assessment and the need for action. The IAEA and France, meanwhile, considered themselves responsible for combating Congressional mistrust more by preventing unwarranted change to the regime than by initiating it. The USSR, while showing little concern that Iraq's reactor had been destroyed, also recognised the opportunity to use Israel's action to score political points off the United States.

To make regime change still more improbable, there was little sense of urgency for action, particularly in the US. A reinforcing event (something akin, perhaps, to the French and West German nuclear deals after the Indian test) never occurred to place change to the nonproliferation regime firmly at the top of any list of priorities. This was even more true when such an event had to compete with

increasing tension between the US and USSR, the conflict in the Middle East, and the potential benefits of cultivating Iraq as a regional counterweight to a post-revolution Iran. Moreover, the question of nuclear nonproliferation generally had lost its previously high place on the American list of priorities. These disparate evaluations of the raid on Osiraq hindered the identification and achievement of solutions to problems around which little consensus existed in the first place.

Although the possibility of the Osiraq shock translating into regime change was not doomed from the outset, it is difficult to see how regime change could have occurred. Those components which were so necessary to bringing about regime change following the Indian test of 1974 were absent in 1981. It seems, therefore, that the handling of the 1981 shock in the context of the regime can only be regarded as a failure in the light of subsequent events, namely the revelations of the enormous Iraqi nuclear weapons programme in 1991 and the abject failure of IAEA safeguards to detect it. Ultimately, it took the much greater (and notably unambiguous) shock of 1991 – the subject of the next chapter – to initiate genuine regime change.

Chapter 6: The Iraqi Revelations of 1991 – A Case of Regime Change?

The post-Gulf War discovery of the Iraqi nuclear weapons programme (as well its biological and chemical weapons programmes) occurred almost exactly ten years after the Israeli raid on the Osiraq reactor in June 1981. Although Iraq's nearness to completing its quest for a nuclear bomb was vociferously debated in the months that followed, its atomic programme had progressed far enough to warrant serious concern about the effectiveness of the nuclear non-proliferation regime.[1] Something had gone dangerously wrong, both in terms of the nuclear exports and materiel which had ended up in Iraq and in the apparent IAEA ignorance regarding Iraq's military activities. Unlike the Osiraq incident, there could be no ambiguity about Iraqi intentions and the failure of the regime thus far to thwart those intentions.

This time, however, the implications of the shock were not discounted. Rather, the revelations regarding Iraq's nuclear programme "had a major impact on the nonproliferation regime, exerting a catalytic effect on the non-proliferation policies of numerous actors."[2] The shock led to a period of rapid and vigorous change which was institutionalised in a variety of ways in the nonproliferation regime. Such change was preceded by a decade of comparative dormancy in the regime's evolution.

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[1] Much of the debate regarding the evolution and success of the Iraqi atomic programme can be found in various issues of the *Bulletin of Atomic Scientists* in 1991-3. See particularly Mark Hibbs and David Albright, "Iraq and the bomb: were they even close?" in *The Bulletin of Atomic Scientists,* vol.47, no.2, March 1991.

[2] Müller, Fischer and Kötter, *Nuclear Non-Proliferation and Global Order,* p.131.

This study of the Iraqi shock and its effect on the nonproliferation regime will begin in the years immediately prior to the Gulf War. This will allow a comparison with the years following the revelations about Iraq's intentions, and make it possible to draw some conclusions as to whether the shock did in fact interrupt a period of inactivity in the regime. More importantly, however, the examination of the years following the shock will be the means by which to determine the extent and type of regime change which occurred.

The Regime and Nuclear Context Prior to the Shock:

The years immediately following the bombing of Osiraq were demonstrated, in chapters four and five, not to have yielded the regime change which followed in the wake of the 1974 Indian nuclear test. The years leading up to the Iraqi revelations were relatively uneventful in terms of nuclear proliferation. Immediately prior to the 1990 NPT Review Conference it was noted that since the last Review Conference in 1985, "there has been no case of overt nuclear proliferation, and fears regarding the intentions of at least three states (Argentina, Brazil and South Africa) have abated."[3]

The nuclear nonproliferation regime had undergone no significant changes in the last half of the 1980's. The bilateral agreements which came out of this period, however, showed that arms control was generally alive and well. One example was the 1987 Treaty between the USA and USSR on the elimination of their intermediate-range missiles, or the INF Treaty. Moreover, the negotiations

[3] John Simpson and Darryl Howlett "The 1990 NPT Review Conference," in *Survival,* vol.32, no.4, July/August 1990, p.349. Following the 1987 debate over whether or not to suspend South Africa from the IAEA, there were "hints that South Africa might be changing its policies and might now accede to the NPT" (Fischer, *History of the IAEA,* p.110). Fischer also noted the fact that, in the 1980's Argentina, Brazil and Chile, "radically changed their policies concerning non-proliferation and IAEA safeguards" (Fischer, *History of the IAEA,* p.113).

for the Strategic Arms Reduction Treaty (START) I Treaty had continued and were coming to a close by the end of the decade.[4] In addition to these agreements between the two superpowers, India and Pakistan had signed an agreement in 1988 prohibiting attacks on each other's nuclear facilities.[5]

In terms of the nonproliferation regime, however, the years preceding the revelations about Iraq had not brought the kind of deep-seated change which had come about in the aftermath of the 1974 Indian test. This is not argue that there were no concerns regarding the regime and its ability to keep potential proliferators in check. In the last few years of the decade, an investigation was begun in West Germany regarding nuclear export standards.[6] Nonetheless, the nonproliferation regime had not been seriously disturbed since the bombing of Osiraq a decade earlier. Not surprisingly, the final five years of the 1980s saw no great leaps forward in its structure or its underlying norms and principles

The Iraqi programme between Osiraq and the Gulf War

The discovery of what Iraq had been up to had self-evident implications for the nonproliferation regime not only because of Iraq's status as a non-nuclear member of the NPT but because, as one commentator noted, "there had been no comparable nuclear proliferation shock since India's 1974 nuclear test."[7] Writing

[4] The Treaty of the Reduction and Limitation of Strategic Offensive Arms, subsequently START I, was finally concluded on 31 July 1991, after nine years of negotiations.

[5] See the Agreement Between Pakistan and India on the Prohibition of Attack Against Nuclear Installations and Facilities, signed 31 December 1988.

[6] The consequence of this reawakened attention to nuclear exports was a tightening of W. German law regarding nuclear exports. (For a more detailed discussion, see Harald Müller, "After the Scandals: West German Nonproliferation Policy," PRIF no. 9, (Frankfurt: Peace Research Institute Frankfurt; 1990) or also see Eric Chauvistré, Arbeitspapiere der Berghof-Stiftung für Konfliktforschung, nr. 43, "Germany and Proliferation: the Nuclear Export Policy," (Berlin: Berghof-Stiftung für Konfliktforschung; 1991).

in *Bulletin of the Atomic Scientists* in 1998, a former Iraqi nuclear scientist, Khidir Hamza, observed that, in Iraq's quest for nuclear weapons, "manipulation of the International Atomic Energy Agency was key".[8] It became gradually apparent, following the discovery of the weapons programme, that not only had Iraq's appetite for the bomb not been sated by the Israeli attack a decade earlier, but that it had been whetted by it. Dr. Jafar dhia Jafar, a leader in Iraq's nuclear quest was cited as claiming that "it was the Israeli bombing of Osiraq that had initially prompted [Saddam's] government to proceed with a secret enrichment program".[9] The Osiraq incident, in other words, seemingly moved the entire programme both figuratively and literally underground.

As discussed previously, the Iraqi nuclear weapons programme had its beginnings in 1976, with the construction of the ill-fated Osiraq reactor. Iraq was, by that time, already in possession of small amounts of plutonium produced from the Soviet-supplied IRT-5000 research reactor in 1968. The post-Osiraq phase of Iraqi nuclear development saw a concerted effort to produce a nuclear bomb. In 1982 research began into various gas-enrichment methods and five years later, lab scale quantities of low-enriched uranium (LEU) were produced by calutrons (also referred to as 'Baghdadtrons').[10] Around the same time (1987-88), construction of the Sharqat calutron enrichment plant began. Documents later recovered by an

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[7] Lewis A. Dunn "Containing Nuclear Proliferation," in *Adelphi Paper 263* (London: International Institute for Strategic Studies; 1991), p.3.

[8] Khidir Hamza, "Inside Saddam's Secret Nuclear Program," *Bulletin of the Atomic Scientists*, vol.54, no.5, September/October, 1998, p.26.

[9] Al J. Venter "How Saddam Almost Built his Bomb," *Middle East Policy*, vol.51, no.3, February 1999, p.52.

[10] For a more detailed description of the progression of the Iraqi nuclear effort, see Richard Kokolski *Technology and the Proliferation of Nuclear Weapons* (Oxford: Oxford University Press; 1995), Chapter 4; Venter "How Saddam Almost Built His Bomb"; and Hamza, "Inside Saddam's secret nuclear program".

IAEA inspection team clearly demonstrated that "since 1988 or 1989 Iraq had invested heavily in facilities to develop and make nuclear weapons."[11] Finally, in 1990 (and following the invasion by Iraq of Kuwait), a crash programme was initiated which made use of reactor fuel in the form of safeguarded highly enriched uranium diverted from peaceful uses.

As had happened prior to 1981, Iraq once again turned to the West – particularly Western Europe – in search of the required technology and expertise. West Germany "featured prominently in almost every phase of the Iraqi nuclear program", with some West German technicians even working for the Iraqis.[12] France, too, provided a source of chemical enrichment technology, having been wheedled into revealing the technology by the Iraqis' expressed desire for more data in order to reach a decision to purchase the technology.[13] The Italian hot-cells, which had been a subject of controversy post-Osiraq were also used in the subsequent reprocessing of the small amounts of plutonium.

The end result was the inauguration of the EMIS (electromagnetic isotope separation) programme for uranium enrichment. The decision to embark on the EMIS programme followed the abandonment of gaseous diffusion and occurred under the banner of 'Petrochemical Project 3', the front organization in charge of Iraq's covert programme.[14] EMIS technology had the good grace to be declassified and thus the most easily accessible, "a fact which, when coupled with the relative abundance of inexpensive electrical power that Iraq could make

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[11] David Albright and Mark Hibbs "Iraq's Bomb: Blueprints and Artifacts," *Bulletin of the Atomic Scientists*, vol 48, no.1, January-February 1992, p.30.

[12] Venter, "How Saddam Almost Built His Bomb," p.55.

[13] It should be noted, however, that despite gaining access to French chemical enrichment technology, the technique has never yet been used successfully, either inside or outside Iraq.

[14] Fischer, *History of the IAEA,* p.279.

available certainly had an impact on Iraq's decision to develop the technique."[15] Its inefficiency, however, meant that Iraqi efforts ultimately shifted in favour of centrifuge enrichment. This became the central focus of the Iraqi nuclear weapons effort in the late 1980's. It was this approach which made the greatest use of so-called dual use technology purchased outside Iraq.[16]

What is of key importance to an understanding of the eventual effect this shock on the regime is the fact that the history of the programme is the history of Western aid and involvement, without which Iraq's atomic ambitions would have been fruitless. Everything that was acquired by Iraq "was [ostensibly] intended for civil or peaceful use."[17] Iraq's nuclear programme was therefore halted only fleetingly by the destruction of Osiraq. Instead, the intervening years between the reactor bombing nd the Gulf War only sharpened Iraq's desire for a successful atomic weapons programme – a programme which, for the most part, went unnoticed and undetected until the invasion of Kuwait and the resulting hostilities.

The Shock:

Unlike the case of both the Indian test explosion of 1974 and the attack on Osiraq in 1981, the shock of 1991 did not come in the form of a single incident, but manifested itself more as series of revelations. During this period, which began in April of 1991 and culminated approximately six months later, it became irrefutably clear that a massive clandestine nuclear weapons programme had been

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[15] Kokolski, *Technology and the Proliferation of Nuclear Weapons* p.102.

[16] For a more detailed discussion about the initial discovery of the Iraqi use of this technology, see Gamini Seneviratne, "IAEA Inspectors Focus on Iraqi Centrifuge Program" in *Nucleonics Week,* vol.32, no.31, 1 August 1991. For a good history of the nuclear technology employed by the Iraqis, see David Albright, Frans Berkhout and William Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies,* (Oxford: Oxford University Press; 1997), chapter 11.

operating in a non-nuclear NPT signatory and, moreover, had been operating undetected for some time. Such disclosures were to have a profound impact on the states and organizations which made up the nuclear non-proliferation regime, and therefore on the regime itself.

Suspicion had long been growing regarding the true nature Iraq's nuclear programme and, indeed, had existed as a low level concern since before Osiraq. The significance granted to these suspicions increased immediately prior to the Gulf War, but it was not until April of 1991 that the gates were finally and formally opened to an exhaustive exploration by an international body.[18] On the 3rd day of that month the United Nations Security Council Resolution 687 was passed which authorised Iraq's disarmament. This resolution, among other things, stressed the IAEA's "[concern with] the reports in the hands of Member States that Iraq has attempted to acquire materials for a nuclear-weapons programme contrary to its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968."[19] It therefore authorised the IAEA, in cooperation with the United National Special Commission (or UNSCOM), "to carry out immediate on-site inspection of Iraq's nuclear capabilities based on Iraq's declaration and the designation of any additional locations by the Special Commission."[20]

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[17] Venter, "How Saddam Almost Built His Bomb," p.55

[18] This concern about Iraq's intentions crops up regularly in much of the literature on the subject, from Leonard Spector's assertion in 1984 of the "doubts as to Iraq's commitment to the Non-Proliferation Treaty" (Spector, *Nuclear Proliferation Today* p.188) to the Presidential Address to the Nation announcing the start of military action in the Gulf, in which President Bush declared the Allies "determined to knock out Saddam Hussein's military potential" ('Address to the Nation Announcing Allied Military Action in the Persian Gulf' 16 January 1991 in *Public Papers of the Presidents of the United States: George Bush 1991 Book I* published 1992).

[19] UN Security Council Resolution 687 (3 April 1991), preamble.

[20] Ibid., Section C, para. 13

The first of the inspections devoted to uncovering the full extent of the Iraqi nuclear programme was carried out between 15-21 May 1991.[21] Over the following few months it became indisputably clear that the Iraqi programme was both extensive and "basically indigenous."[22] The Netherlands invited all members of the Nuclear Suppliers Group, which had not met in full for fourteen years, to reconvene at long last in the Hague. This proposal was greeted with an enthusiasm which contrasted sharply with the reluctant participation which had characterized the dawn of the NSG. As one observer commented,

> the old objections that some of the suppliers that 'ganging up' by the industrialized exporters would offend and alienate the developing countries had disappeared under the impact of the Gulf War.[23]

Between May and the end of September 1991, six visits took place, all of which confirmed the evasion of NPT obligations by Iraq. The partially complete EMIS programme at Al Tarmiya, large quantities of natural uranium, hot cells and small amounts of plutonium were all discovered, but it was not until the sixth inspection, in September, that extensive documentation was uncovered. It was at this time that the IAEA inspections revealed, beyond a doubt, the true extent to which Iraq had abrogated its NPT obligations.[24]

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[21] For the purposes of this chapter there is no need to go into the chronological history or other minutiae of the IAEA/UNSCOM inspections. A much more detailed account of the inspections themselves may be found, once again, in Kokolski, *Technology and the Proliferation of Nuclear Weapons,* Chapter 4, part IV.

[22] Ibid., p.109.

[23] Harald Müller, "The Nuclear Non-Proliferation Regime Beyond the Persian Gulf War and the Dissolution of the Soviet Union," in *SIPRI Yearbook 1992: World Armaments and Disarmament* (Oxford: Oxford University Press; 1992) p.97.

[24] Kokolski, for his part, identifies the findings of these inspections as "a watershed in understanding the true purpose and scope of Iraq's nuclear programme – particularly concerning weaponization" (Kokolski, *Technology and the Proliferation of Nuclear Weapons,* p.123).

By July, however, the IAEA Board of Governors had already seen fit to declare Iraq in violation of its safeguards agreement with the IAEA – "the first finding of a violation of an agreement since the IAEA began applying its safeguards in 1959."[25] In September, as the contents of the documentation was being reported, the IAEA General Conference adopted a resolution condemning Iraq's non-compliance with its obligations.[26] In addition, the UN Security Council on August 15th formally concluded that Iraq's failure to comply with its safeguards obligations did indeed constitute "a violation of its commitments as a party to the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968."[27]

The true shock itself – the unveiling of an extensive Iraqi weapons programme – was thus revealed with the first IAEA inspections in May 1991 and culminated four months later in September. It was during this period that strong suspicion gave way to hard proof (despite the best efforts of the Iraqis to disguise their work) of the first official violation of of the NPT.[28] Less than a year before, *Nucleonics Week* referred to IAEA reports that "its latest safeguards inspection in Iraq detected no diversion of safeguarded materials" and quoted a US government source as declaring that "Bush is beating the drum based on a very speculative worst-case scenario."[29] By mid-July of 1991, however, the "London Economic

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[25] Fischer, *History of the IAEA: The First Forty Years,* p. 281.

[26] Ibid., p.281. The resolution was adopted by 71 votes to 1 (Iraq, predictably), although there were seven abstentions in the form of Algeria, Cuba, Jordan, Libya, Morocco, Namibia and Sudan.

[27] UN Security Council Resolution 707, para. 2 (Reprinted in Kokolski, *Technology and the Proliferation of Nuclear Weapons,* p.338).

[28] It was, at this point, still unclear whether or not INFCIRC/153 safegaurds had been violated, although it was becoming plain that the system was flawed.

[29] Mark Hibbs, "Iraqi Nuclear Threat Warnings Called Unrealistic War Rationale," *Nucleonics Week* November 29 1990, p.7.

Summit Declaration on Conventional Arms Transfers and Nuclear, Biological and Chemical Weapons Proliferation" had asserted that: "the Gulf Crisis has highlighted the dangers posed by the unchecked spread of these weapons...[and that the members were] determined to combat this menace by strengthening and expanding the non-proliferation regime."[30] The events of September, however, brought to light "two 'smoking gun' documents that belied Iraq's denials about a weaponization effort."[31] The four initial months of revelation had consisted chiefly of evidence-gathering and the formal condemnation of Iraq by both the IAEA and UN Security Council. The months following the inspection of September 1991 stood as the beginnings of the reaction to the shock: post-revelation and post-condemnation. In spite of a history of suspicion regarding Iraqi intentions, the confirmation and manner of such a deception shattered confidence in the IAEA safeguards system, and raised serious questions about the effectiveness of the NPT and the regime as a whole.

Initial International Reactions:

It has been observed of the period following the Iraqi shock that if "1991 was marked by major changes and turbulence in the non-proliferation regime [then] 1992, by contrast, could best be characterized as a year of quiet consolidation."[32] This formal consolidation began in 1992 and continued for a period of approximately three years, ending with the indefinite extension of the

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[30] *London Economic Summit Declaration on Conventional Arms Transfers and Nuclear, Biological and Chemical Weapons Proliferation*, 16 July 1991, reprinted in Public Papers of the Presidents of the United States: George Bush, Book II. p.891.

[31] David Albright and Robert Kelley "Has Iraq Come Clean At Last?" *Bulletin of the Atomic Scientists*, vol. 51, no.6, Nov/Dec. 1995, p.57.

NPT in 1995. However, prior to the institutionalization of the lessons of Iraq lay the period between the event and the response: the initial reactions and considerations by the members of the regime as to what was to be done. In this case, this phase lay between the end of September 1991 (when Iraqi nuclear ambitions ceased to be open to question) and the beginning of April 1992. During this time, actors such as the United States, Germany (and other major suppliers), the UN Security Council and finally the IAEA were able to react to the shock and consider its implications in the context of the regime. These initial post-shock months are thus vital to understanding the events that eventually followed.

The United States

It is generally accepted that, as one article on the subject observed, the revelations regarding Iraq's nuclear ambitions "shook the international nonproliferation regime, revealing major weaknesses in inspection routines, export controls, and intelligence-gathering and sharing,"[33] and the initial reaction in the US to the shock certainly appears to have borne this out. Unlike the Osiraq shock of 1981, Iraqi ambitions were no longer an allegation, but a reality. After a decade of emphasis on the Cold War, nuclear relations between the US and USSR, and a series of bilateral agreements to restrict vertical proliferation, a non-nuclear NPT signatory had been found in contravention of its treaty obligations.

As early as March 1991, a White House Statement had already declared that "our experience in the Gulf has reinforced the lesson that the most effective

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[32] John Simpson "The Nuclear Non-Proliferation Regime in 1992," in *Verification 1993: Peacekeeping, Arms Control and the Environment* J.B. Poole and R. Guthrie (eds.) (London: Brassey's; 1993).p77.

export controls are those imposed multilaterally."[34] The ACDA, in its annual report to Congress, concurred, stating that "Iraq's unsafeguarded clandestine nuclear activities have also served to remind the international community that adherence to nonproliferation treaties alone may not suffice as proof of a state's good faith."[35] A month later, the US House of Representatives met and initiated a debate on the implications of the story emerging from Iraq. This initial domestic discussion of clandestine nuclear proliferation and Iraq was held, appropriately enough, before the Subcommittee on Oversight and Investigations and was concerned to address "failed efforts to curtail Iraq's nuclear weapons program."[36] It was in this hearing that the role of the US Department of Energy (DOE) and its relationship with Iraq was scrutinised and attacked as both inadequate and hopelessly naïve.

Following the incontrovertible evidence of Iraq's deception in September of 1991, the Senate Committee on Foreign Relations convened a month later. Once again, it met with the intention of trying to understand what had happened and to make an explicit attempt (as the title claimed) of "learning from the Iraq experience."[37] This hearing, which took place over two days, served to

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[33] Albright and Kelley, "Has Iraq Come Clean at Last?" p.55.

[34] "White House Statement on Weapons of Mass Destruction," 7 March 1991 in *Public Papers of the Presidents of the United States,* George Bush, 1991 Book I (Washington, D.C.: U.S. Government Printing Office; 1992) p.223.

[35] "United States Arms Control and Disarmament Agency Annual Report to Congress, 1991," p.90.

[36] *Nuclear Non-Proliferation,* Hearing Before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, House of Representatives, One Hundred and Second Congress, first session, Concerning failed efforts to curtail Iraq's nuclear weapons program, April 24, 1991. This hearing was initially classified but was subsequently declassified and the bequest of the Department of Energy with any remaining classified information deleted.

[37] *Nuclear Proliferation: learning from the Iraq experience*, Hearing Before the Committee on Foreign Relations, United States Senate, One Hundred and Second Congress, first session, October 17 and 23, 1991.

consolidate the deep concern with which Congress first greeted the discoveries in Iraq. Continued attacks on the export policy of various American firms and the US government were this time accompanied by testimony from IAEA representatives who called for greater cooperation between state governments and the IAEA, as well as among individual states themselves.[38]

In Congress especially, the question of nuclear non-proliferation (and the proliferation of weapons of mass destruction generally) had moved rapidly nearer the top of the agenda than had been the case since the brief flurry of activity which had surrounded the bombing of Osiraq ten years earlier. The belief was expressed that, as one article put it, "Washington has been too quick to sacrifice nonproliferation goals to other foreign policy objectives" – not least the perceived expediency of supporting Iraq in its eight year war with Iran.[39] In the months immediately following the Iraq revelations, deliberations began within the government on what had gone wrong and why. Newspapers such as the *International Herald Tribune* and *The Wall Street Journal* continued the discussion more publicly. To be sure, this consisted mainly of disparaging the IAEA. The *International Herald Tribune*, for example, carried the contention in October 1991 that "the IAEA did what it could – which wasn't much."[40] Five months later, in March 1992, it continued to assert that "Iraq had demonstrated that this previous system was grossly inadequate."[41] *The Wall Street Journal*, in a somewhat more circumspect fashion, merely pointed out that "Iraq used

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[38] Testimony on behalf of the IAEA was given by Dr. David Kay (the IAEA's chief inspector for the decisive sixth inspection of Iraqi facilities) as well as Dr. Hans Blix (still the Director-General of the Agency).

[39] John M. Deutch, "The New Nuclear Threat," *Foreign Affairs* vol.71, no.4, Fall 1992.

[40] *International Herald Tribune,* 18 October 1991.

[41] *International Herald Tribune,* 18 March 1992.

equipment from German, Swiss and US companies in its secret program to build a nuclear bomb."[42] Nuclear non-proliferation had not merely returned as a subject of debate but, as the initial reaction shows, was an immediate *cause célèbre* in the United States for the first time since under the Ford and Carter Administrations in the aftermath of the Indian test explosion. Directly after the discoveries in Iraq, it is possible to observe real American concern (and as will become apparent later, the beginnings of the undermining of American confidence in the politico-legal institution of the nuclear nonproliferation regime).

The USSR/Russia

The break-up of the Soviet Union was, naturally enough, an event which overshadowed the shock of the Iraqi revelations from Moscow's perspective. The Cold War was at an end and had been replaced by what was to be a relatively brief golden era of cooperation between Russia and the United States both within and outside the UN Security Council. Correspondingly, as the Soviet Union officially dissolved in December of 1991, the question of Iraq and its nuclear programme was one which took a back seat to the upheaval closer to home. Traditional cooperation on nuclear non-proliferation and the regime prevailed. As a consequence, it need only be said that the former Soviet Union was happy to let the United States and its growing body of supporters in Western Europe take the lead, and was willing to cooperate at the international level.[43]

(West) Germany and France

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[42] *The Wall Street Journal,* 12 December 1991.

[43] This, of course, was hardly a radical departure from the behaviour of the USSR in the past insofar as nuclear nonproliferation was concerned, that regime being one area, at least, where the goals and inclinations of the two superpowers were broadly compatible. As in the case of the

On the 16th of July 1991, a meeting of the European Union (EU) states at the London Economic Summit revealed an apparent shift in the broad Western European attitude to nuclear non-proliferation and the importance of the regime. This movement within the EU states in support of the regime's restrictions on nuclear supply was one which had begun in 1990, with the Dublin Declaration on Nonproliferation in June of that year. Nonetheless, the specific revelations regarding Iraq prompted the blunt statement that "the Gulf Crisis has highlighted the dangers posed by the unchecked spread of these weapons" and proclaimed, moreover, that "we are determined to combat this menace by strengthening and expanding the non-proliferation regime."[44]

After two decades of opposition to the discriminatory NPT system, France deposited the instruments of accession to the NPT in August 1991. This gesture indicated that a significant shift in the attitude of France to the issue of nuclear nonproliferation had already occurred prior to the revelations in Iraq and stood in sharp contrast both to French suspicions of the Nuclear Suppliers Group at its birth in the 1970's as well as its anger and strong denials of shortcomings in its nuclear relations with Iraq following the bombing of Osiraq ten years earlier.

Although it cannot be claimed that the French accession to the NPT was prompted the discoveries in Iraq, France's resolve in favour of multilateral nuclear nonproliferation efforts was cemented by the events. The aftermath of the Gulf War saw France "change its policy and...[instead become] determined to demonstrate its readiness to co-operate internationally for non-proliferation

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Indian test in 1974, if the Soviet Union did not initiate the institutions that grew out of the shock, it did not, at any rate, try to impede them.

[44] London Economic Summit Declaration on Conventional Arms Transfers and Nuclear, Biological and Chemical Weapons Proliferation 16 July 1991 reprinted in *The Public Papers of the Presidents of the United States,* George Bush, 1991 Book I, p.891.

purposes."[45] Most notably, the mistrust which characterised the French attitude to institutionalised full-scope safeguards (as originally proposed in London) had given way to a keen participation in the revived NSG meetings which began in the Hague in March 1992.[46]

The same was true of Germany, the country whose industries and scientists were under the greatest amount of fire for their part in Iraq's progress towards nuclear weapons. Although in the few years immediately preceding the shock, West German nuclear export policy had become a focus of domestic concern and investigation, Iraq's ambitions laid to rest any doubt over the flaws that had existed. Investigations into deals such as those with Pakistan and Libya took place in the final two years of the 1980's. However, until the discoveries in Iraq, concrete evidence of the consequences of such policies remained unforthcoming. Nonetheless, and in the words of one commentator, it was amply demonstrated "how weak the controls have been in the face of a determined industry backed by a sympathetic bureaucracy unmoved by proliferation concerns."[47]

The shock of Iraq was thus followed by an immediate intensification of the concern over the German contribution to horizontal nuclear proliferation.[48] As in France, such concern was markedly different to the heel-dragging which had characterised the initial West German reaction to the Indian test explosion in

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[45] Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War," p.97.

[46] At the 2000 NPT Review Conference, this new French enthusiasm in favour of nuclear nonproliferation and the regime appeared to have swung back to its former position, with the French again keen to water down the commitment to full-scope safeguards, mainly to open the door to exporting to India.

[47] Paul Leventhal, "Plugging the Leaks in Nuclear Export Controls: Why Bother?" *Orbis,* vol.36, no.2, Spring 1992, p.169-70.

[48] For a detailed assessment of the companies involved in Iraq's efforts see David Albright and Mark Hibbs, "Iraq's shop-till-you-drop Nuclear Program," *Bulletin of the Atomic Scientists*, vol.48, no.3, April 1992, pp.26-35. Also helpful is David Albright and Mark Hibbs, "Supplier

1974. In April of 1992 one article observed that "Western companies and governments, particularly Germany, do not want to be embarrassed by public revelations about their involvement in Iraq's nuclear program."[49] Such publicity, however was unavoidable. This did not escape the German government, which moved to help the investigation into Iraq's activities, as well as tighten its own laws governing nuclear exports. In January of 1992, for example, IAEA officials "armed with information from the German government...accused Iraqi Foreign Ministry officials of failing to declare large quantities of materials and components Iraq had obtained for its gas centrifuge program."[50] In the wake of the discomfort arising over previous export policy and then in the face of the incontestable revelations about the extent and origins of the Iraqi nuclear programme, German levels of cooperation over the issue of nuclear export controls increased substantially. Immediately following the Iraq revelations, Germany make evident its recent transformation from "one of those states previously reluctant to stiffen international restrictions [to one which was] very interested in an international agreement to reinforce export controls."[51]

The United Nations Security Council

Insofar as the discoveries in Iraq were concerned, the UN Security Council played and active and important role in the actions that were to follow. The invasion of Kuwait, which roughly coincided with the dissolution of the Soviet

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Spotting (German firms supplied Iraq with nuclear components)," *Bulletin of the Atomic Scientists*, vol.49, no.1, January/February 1993, pp.8-9.

[49] Ibid., p.29

[50] Ibid., p.29. Also in the early months of 1991, the twelve EC member states, with full German and French support, "agreed to consider the possibility of a more sophisticated common policy on nuclear exports" (Müller "The nonproliferation regime beyond the Persian Gulf War" p.98-99).

Union and subsequent visions of a cooperative new world order, found the P-5 of the Security Council unusually united, at least as far as Iraq's behaviour and the undesirability of horizontal proliferation was concerned. As a result, when the extent of Iraq's misbehaviour became clear, the Security Council was quick to authorise Resolutions 786 and 707, in April and August of 1991, respectively. Resolution 687 officially empowered the IAEA to begin inspections in Iraq and called on Iraq "to reaffirm unconditionally its obligations under the Treaty of the Non-Proliferation of Nuclear Weapons of 1 July 1968."[52] Resolution 707 was agreed after a report by the IAEA to the Security Council in July, and found the Security Council disposed to "[condemn] non-compliance by the Government of Iraq with its obligations under its safeguards agreement with the International Atomic Energy Agency."[53]

After the "smoking gun" documents of September 1991, the Security Council passed Resolution 715, which maintained the show of unity and reiterated the demand "that Iraq meet unconditionally all its obligations under the plans approved...and cooperate fully with the Special Commission and the Director-General of [the IAEA]."[54] The efforts by Iraq to attain nuclear weapons and later to inhibit IAEA attempts to reveal these aims were of a sort which bred unanimity in the Security Council. The profile of nuclear proliferation (as well as that of chemical and biological weaponry) had been immediately raised in January 1992

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[51] Müller, "The nuclear nonproliferation regime beyond the Persian Gulf War," p.97.

[52] UN Security Council Resolution 687, 3 April 1991, Sec. C, para. 11. The resolution invited IAEA inspections as a request to the Director-General of the IAEA "with the assistance and cooperation of the Special Commission as provided for in the plan of the Secretary-General referred to in paragraph 9(b), to carry out immediate on-site inspection of Iraq's nuclear capabilities based on Iraq's declarations" (UN Security Council Resolution 687, Sec. C, para 13).

[53] UN Security Council Resolution 707, 15 August 1991, para.2

[54] UN Security Council Resolution 715, 11 October 1991, para. 6

when the Security Council spoke of its conviction that "the proliferation of weapons of mass destruction constitutes a threat to international peace and security."[55] As one American expert observed, "the Security Council have taken cognizance of the problem of proliferation of weapons of mass destruction, and, in a sense, put on notice would-be proliferators."[56]

The IAEA

Without any doubt, it was the IAEA which was dealt the most serious blow by the discovery of Iraq's weapons programme, and it was the IAEA which had to learn the most lessons. In August of 1990, the IAEA Deputy Director-General, Jon Jennekens had publicly maintained that Iraq was "a solid citizen" whose cooperation with safeguards and the NPT itself was "exemplary."[57] The subsequent revelations did little to inspire confidence in the IAEA's abilities. As one IAEA publication admitted:

> Iraq's non-compliance with the provisions of its safeguards agreement with the IAEA, and the magnitude of its undeclared nuclear weapon development programme, have forcefully underlined the fact that the safeguards assurances presently provided by the IAEA...alone are insufficient.[58]

Director-General, Hans Blix was quoted in a newspaper article in October 1991 as saying that, even in spite of IAEA suspicions regarding Iraq, "to see the enormity

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[55] Declaration of the Security Council Summit Meeting, 31 January 1992 (reprinted in the *New York Times* 1 February 1992).

[56] Lawrence Scheinman "The Non-Proliferation Treaty: On the Road to 1995," *IAEA Bulletin* vol.34, no.1, 1992, p.37-38.

[57] Jennekens quoted in Eric Chauvistré, "The Future of Nuclear Inspections," *Arms Control*, vol.14, no.2 (August 1993), p.33.

[58] J. Jennekens, R. Parsick and A. von Baeckmann "Strengthening the international safeguards system," *IAEA Bulletin*, vol.34, no.1, (1992) p.6

of it is a shock."[59] An article in another newspaper even went so far as to proclaim that the discoveries in Iraq "must signal the beginning of the end of the Vienna-based international nuclear watchdog in its current form."[60] The IAEA was surprised and embarrassed by these revelations, and for good reason. Prior to the Gulf War it was generally thought (not simply by the IAEA) that "the establishment of a self-contained capability to produce nuclear weapons materials entirely separate from a state's declared nuclear program would be too large and difficult an undertaking for most would-be proliferators."[61]

The information coming out of Iraq clarified two key questions. Firstly, the question of whether or not Iraq had, in fact, violated its INFCIRC/153 agreement with the IAEA was answered when it became apparent that safeguarded HEU had been diverted during the Gulf War. Secondly (and more importantly) the question of whether IAEA safeguards were, in practice, capable of detecting clandestine activities was answered in the negative. Consequently, it was the IAEA (specifically, it's safeguards, inspection and verification procedures) which "was seen by many as having failed its (presumably) first diversion detection test."[62] After initial defensiveness, the IAEA admitted to the existence of flaws in its system – an acknowledgment which differed sharply from the reaction of the Agency to the accusations levelled at it following the Osiraq bombing. At an emergency meeting of the Board of Governors on 18 July of 1991, Iraq was officially cited as the first confirmed

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[59] *International Herald Tribune,* 14 October 1991.

[60] *The Daily Telegraph,* 25 September 1991.

[61] John Carlson, Victor Bragin, John Bradley and John Hill "Nuclear Safeguards as an Evolutionary System," *The Nonproliferation Review*, vol.6, no.3, Winter 1999, p.109.

[62] Fischer, *History of the IAEA,* p.284.

violation of the NPT and IAEA safeguards. Hans Blix, addressing the Board, acknowledged that "the case of Iraq demonstrates the challenges that may need to be met and the ability of the IAEA to meet them."[63]

The period between July 1991 and February 1992 was for the IAEA, as for most the national governments involved, a time for discovering exactly what had happened, how it had happened, and what was to be done about it. During this initial phase, the IAEA was able to assess, more or less, the extent of the Iraqi programme. It was then able to secure a verbal declaration of the support of the UN Security Council in the event of any future violations.[64] It also, in February 1992, took what an Agency publication itself described as "the first concrete steps to strengthen safeguards"[65] when, on the proposal of the Director-General, the Board reaffirmed the IAEA's "right to carry out special inspections at any location in a State having a comprehensive safeguards agreement if the Agency had reason to believe that the State was carrying out unreported nuclear activities."[66] Finally, Director-General Blix stated in an address to the UN General Assembly that the ability of the IAEA to safeguard effectively and uncover undeclared material and installations such as that in Iraq "would increase dramatically if the IAEA, was to be routinely provided with relevant information available to Member States."[67]

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[63] Hans Blix – address to the IAEA Board of Governors, quoted in "International Newsbriefs Section: Nuclear Capabilities of Iraq: IAEA inspections continue," *IAEA Bulletin* vol.33, no.3 1991.

[64] This Security Council backing of the IAEA in Iraq was first stated in Resolution 687.

[65] "The Evolution of IAEA Safeguards," *International Nuclear Verification Series* no.2 p. 24

[66] Ibid., p.24.

[67] IAEA Director-General statement to UN Assembly, quoted in *IAEA Bulletin* vol.33, no.4, p.38. This sentiment was reiterated by Dr. Blix a year later in his article, "IAEA Safeguards: New Challenges," *Disarmament,* vol.15, no.2 p.43.

The three lessons immediately apparent from Iraqi experience – the need for access to the Security Council, access to relevant intelligence, and Security Council support of the IAEA's right of special inspections – were the initial conclusions drawn in the IAEA's "consolidation phase" during the first year of inspections in Iraq. Moreover, it was becoming clear that following the discoveries in Iraq, that "the danger of proliferation arises chiefy from clandestine nuclear weapon programmes and not the diversion of fissile material from safeguarded civilian facilities."[68] The role of the IAEA would therefore be not only to verify that safeguarded materials were not being diverted, but also to detect separate clandestine activities as well. Its first tangible step towards formalising these lessons was by way of the reaffirmation of its rights of special inspections under the provision of INFCIRC/153. The second half of 1991 and first part of 1992 was, perhaps more for the IAEA than for any other regime actor, a time to investigate what had gone wrong (by way of the inspections) and plan for the future. The uncovering of Iraq's nuclear ambitions, however, were eventually to prompt not just a reaffirmation of the existing rights of the IAEA, but the creation of new ones as the shock of 1991, unlike that of 1981, brought considerable change to the structure and practice of safeguards themselves.

The Outcome of the Shock:

Warsaw Guidelines

The shock of Iraq's clandestine nuclear programme evoked immediate international concern and determination to make amends. In this it differed from both the delayed reaction to the Indian test of 1974 and the disunited vitriol which

followed the bombing of Osiraq. The rebirth of the Nuclear Suppliers Group in the Hague in 1991 – after a sabbatical of thirteen years – was not a coincidence occurring as it did on the heels of the Gulf War and the disturbing findings in Iraq. Despite the reproaches handed out to the IAEA, it was observed, too, that "the Persian Gulf War also brought to light the weakness of existing export control."[69] This was underscored by the beleaguered Agency itself. "The disclosures in the Gulf War" an IAEA publication observed, "...underlined the important role that *dual use* items had played in the evolution of Iraq's nuclear weapon programme."[70] The ambiguity of technology required had not escaped the attention of key regime members and supplier states, and it had become clear that "the hardware used to make nuclear weapon material may not be the type of material that intelligence services normally look for or that is on export control lists."[71] As was demonstrated above, states such as the US, France and Germany were particularly aware of and worried as much by the method of proliferation as by the near-proliferation itself. The result was what one participant in the Hague meetings described as "a dynamic new spirit of cooperation."[72]

After a year of negotiations, April 1992 saw the official unveiling of the first and most important of the broadened conditions of export. Iraq had exploited the dual use gap that existed in nuclear trade policies, and the so-called Warsaw Guidelines attempted to address and close that gap. The stated objective of these expanded guidelines was to prevent the proliferation of nuclear weapons by

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[68] Müller, Fischer and Kötter, *Nuclear Non-Proliferation and Global Order,* p.132.

[69] Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War," p.97.

[70] "The Evolution of IAEA Safeguards," p. 73

[71] Fischer, *Towards 1995,* p.71.

implementing stricter controls on "the transfer of certain equipment, material, and related technology that could make a major contribution to a 'nuclear explosive activity' or an 'unsafeguarded nuclear activity.'"[73] The same types of transfers, in other words, which had contributed to the progress of Iraq's nuclear weapon programme. The Guidelines also introduced a new annex of dual-use equipment, material and technology, thereby extending the list of proscribed items that would trigger export controls. The items cited in the annex, not surprisingly, "included detailed descriptions of many of the technological methods that had been explored by Iraq, particularly in the area of centrifuge technology and EMIS."[74]

Agreement on the Warsaw Guidelines stood as the first multilateral formalisation of the lessons which had been learned following the revelations of Iraq's nuclear ambitions. The critical role of the disclosures of the Gulf War in inspiring the revival and spirit of these new guidelines has been cited not merely by outside observers but by at least one participant in the negotiations of the guidelines themselves. Writing in *The Nonproliferation Review*, Ambassador Tadeusz Strulak, Chairman of the NSG meeting in 1992, stated that "the war made the suppliers realize the potential dangers involved and the urgent need for action to prevent them. This, in my view, was a major factor in reviving the Nuclear Suppliers Group."[75] Moreover, the NSG – identified as "an essential part of the nuclear nonproliferation regime" [76] – had been dormant for nearly a decade

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[72] Tadeusz Strulak, "The Nuclear Suppliers Group," *The Nonproliferation Review*, vol.1, no.1, Fall 1993, p.4.

[73] Warsaw Guidelines, 3 April 1992 Objectives, para. 1

[74] Kokolski, *Technology and the Proliferation of Nuclear Weapons*, p.189.

[75] Strulak,"The Nuclear Suppliers Group," p.4.

[76] Ibid., p.7. As a key participant of the talks which led to the creation and adoption of the Warsaw Guidelines, it could of course be argued that Ambassador Strulak was unlikely to see the

and half previous to the shock of the Iraqi disclosures. The unwillingness, in the late 1970's, to countenance full-scope safeguards continued long into the 1980's, with Germany formally making them a condition of trade only in 1990. However, it was at the1990 NPT Review Conference that the endorsement of full-scope safeguards took place, again demonstrating the momentum in the EU, particularly, which had existed before, and been subsequently galvanised by, the Iraqi revelations. The Warsaw Guidelines, consequently, did not suffer from the dissent which had plagued the question full-scope safeguards. States such as Germany and France were, by the time of the shock, already keen publicly to show a pro-active dedication to the nuclear nonproliferation regime. The NSG meeting in Warsaw was able to adopt a declaration requiring full-scope safeguards for non-nuclear states.[77] The shock of Iraq in 1991 may thus be seen to have generated both an understanding of the loopholes in the regime that remained, as well as a flurry of rule-making which stood in sharp contrast to the time previous.[78]

The Guidelines for Nuclear Transfers (Revised London Guidelines, April 1993)

Exactly a year from the adoption of the Warsaw Guidelines, April 1993 gave rise to the second significant move to strengthen the nonproliferation regime in reaction to the Gulf War shock. The Guidelines for Nuclear Transfers, adopted in Lucerne, were less a new set of guidelines (as were those on dual-use

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Guidelines as anything less than integral. Despite the recent extended period of inactivity, however, the creation of and controversy surrounding the NSG in 1977 seems to indicate that the perception of their importance to the regime was broadly shared.

[77] As noted previously, this new French commitment to the strict application of full-scope safeguards was much less in evidence during the 2000 NPT Review Conference.

[78] The Warsaw Guidelines were agreed by Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan,

technology) and instead a revision and expansion of the original London Guidelines on Nuclear Transfers and the attached trigger list which had remained unchanged from their creation in 1977. These new guidelines expanded the principles for safeguards and export controls, which "should apply to nuclear transfers to any non-nuclear-weapon State for peaceful purposes."[79] Among the recommendations on physical protection, retransfer and security were special controls on sensitive exports which, as in 1977, called for suppliers to "exercise restraint in the transfer of sensitive facilities, technology and weapons useable materials."[80] In addition, the need for international support of IAEA safeguards and their implementation and verification was emphasised.[81]

The trigger list for nuclear transfers, like the trigger list for dual-use items, arose out of concerns which had been raised by the structure of the Iraqi programme. This was particularly evident in the inclusion of EMIS-related technology. IAEA inspectors were informed by the Iraqis that "the only real obstacle remaining in the development of an efficient [calutron] system was an improved ion source."[82] The expanded London Guidelines' trigger list duly identified, among other things, components closely associated with Iraq's nuclear efforts such as "plants for the separation of isotopes of uranium and equipment",

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Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, UK, USA.

[79] Guidelines for Nuclear Transfers (Revised London Guidelines) 1 April 1993, para. 1.

[80] Ibid., para. 7.

[81] Ibid., para 12.

[82] Mark Hibbs, "Ion source problems held up Iraqi program," *Nucleonics Week* vol.32, no.32, 8 August 1991, p. 9. Quoted in Richard Kokolski, *Technology and the Proliferation of Nuclear Weapons* p. 189-190.

including gas centrifuges and components and equipments for gas centrifuge enrichment plants, as well as "ion sources [and] ion collectors"[83]

Finally, IAEA calls for international support and backing in the wake of the Iraqi disclosures were heard and institutionalised in the revised London Guidelines. The revised Guidelines called on supplier states to "make special efforts in support of effective implementation of IAEA safeguards."[84] Moreover, they lent support to the IAEA for making changes of its own to its methods of preventing nuclear proliferation. The new Guidelines call on its signatories to "make every effort to support the IAEA in increasing further the adequacy of safeguards...and to support appropriate initiatives aimed at improving the effectiveness of IAEA safeguards."[85]

Like the Warsaw Guidelines, the revised London Guidelines of 1993 were part of the renaissance of the Nuclear Suppliers Group. They expanded a trigger list which had gone unchanged for thirteen years. The fact that the revised guidelines and trigger list focused heavily on such things as EMIS technology and gas centrifuge enrichment points as much to the influence of the Iraqi shock as the creation of guidelines on dual-use equipment a year earlier. The translation of the shock into regime change had been undertaken at the state level in a manner which differed markedly from the indecision over the Osiraq incident and expanded the scope of the nonproliferation regime considerably.

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[83] Guidelines for Nuclear Transfers (Revised London Guidelines) para. 5 (isotope separation), para. 5.1 (gas centrifuge), para. 5.2 (equipment and components for gas centrifuge enrichment plants) and para. 5.9.1 (electromagnetic isotope separation)

[84] Guidelines on Nuclear Transfers para. 13

[85] Ibid. The revised London Guidelines were agreed by Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary,

The 93+2 Safeguards Programme

It was written in 1992 that "one consequence of the revelations about Iraq was considerable momentum to reform IAEA safeguards."[86] In contrast to a decade earlier, this momentum translated into concrete changes to the safeguards system. At the end of September, 1993, the UN Secretary-General addressed the IAEA General Conference in Vienna and observed that

> Iraq's secret and extensive efforts to develop nuclear weapons must serve as a warning against complacency....The opportunity to make substantial progress is now before us. We must not let it slip through our grasp.[87]

After initial resistance, such concern was shared by the IAEA. As noted above, the Agency's reaction to the shock of Iraq involved a rapid attempt, particularly by Director-General Blix, to draw out the lessons that had been unearthed and a recognition by its officials that the "events of 1991 made it clear that the evolutionary development of safeguards approaches need acceleration" and, just as significantly, that "safeguards assurances presently provided by the IAEA...alone are insufficient."[88]

The attempt to transform the lessons of Iraq into tangible improvements to the safeguards system began, somewhat innocuously, with a reaffirmation of the IAEA's established right to special inspection in February 1992. The first

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Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, UK, USA.

[86] Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War", p.95.

[87] "Message of the Secretary-General to the General Conference of the IAEA in Vienna" [UN Press Release SG/SM/5113] 27 September 1993, reprinted in *United Nations Blue Books Series* Volume III: The United Nations and Nuclear Non-Proliferation (New York: United Nations Department of Public Information; 1995).

[88] Jennekens, Parsick, and von Baeckmann, "Strengthening the international safeguards system," p.10.

tangible initiative came with the establishment of Programme 93+2. It started with the April 1993 recommendation of the IAEA's Standing Advisory Group on Safeguards Implementation (SAGSI) that the role of safeguards should be expanded to provide assurance of no undeclared nuclear activities. This, as the IAEA itself asserted,

> was an important departure from a practice that had developed in implementing INCIRC/153, namely, of focusing on safeguards primarily (in practice, almost exclusively) on nuclear material in declared facilities.[89]

The potential importance of undeclared facilities had, of course, been highlighted by the discoveries in Iraq.

There is not space here to give a detailed account of the complicated history of Programme 93+2. Suffice it to say that the programme itself was formally endorsed by the IAEA Board of Governors in December 1993 and sought to codify the experiences of Iraq into IAEA practice. Its emphasis lay particularly in the areas of environmental sampling, verification of the completeness of State declarations, and extension of the IAEA's right of access. In addition, the programme sought to achieve greater cost efficiency in an attempt to "enable the IAEA to reduce its routine inspections at certain standard types of plant."[90] The first documents of Programme 93+2 were submitted to the Board of Governors in June 1995, and adopted by the General Conference in September 1996.[91]

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[89] "The Evolution of IAEA Safeguards," p.25.

[90] Ibid.

[91] This document – Part I of the programme – contained additional measures "that the IAEA had the authority to undertake *within the framework of existing comprehensive safeguards agreements.*" (Ibid., p.25).

Prior to the conclusion of the second part of Programme 93+2, the NPT Review and Extension Conference of 1995 was covered to decide the Treaty's future. In the end, indefinite extension of the Treaty was unanimously approved, although with three collateral documents: "Strengthening the Review Process", "Principles and Objectives for Nuclear Nonproliferation and Disarmament" and the resolution on the Middle East. Of these, the "Principles and Objectives" called for, among other things, universality of adherence to the Treaty, nuclear disarmament, and the creation of NWFZ.[92]

The second part of Programme 93+2 (whose negotiation began in 1993 but was not concluded until 1997) was intended to provide the IAEA with greater legal authority than it already possessed. The "Model Addition Protocol" (MAP) was developed between June 1996 (when the Board set up a committed to draft the protocol) and April 1997. The approval of this new protocol (INFCIRC/540) was hailed by the Chair of the Board of Governors as "a major achievement, crowning five years of effort by IAEA Member States and the Secretariat."[93]

The History and Outcome of the Shock: a case of regime change?

As before, the history of the shock and the years immediately before and following it have served to provide a context with which the occurrence or absence of regime change may be understood. It is necessary first to draw

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[92] The call for universality as well the creation of a NWFZ in the Middle East became the means by which Arab states were persuaded to vote in favour of the indefinite extension. Earlier in the Conference, these states had threatened to withhold support for indefinite extension unless Israel joined and ratified the NPT. For a good overview of the 1995 Conference, see John Simpson, "The nuclear non-proliferation regime after the NPT Review and Extension Conference," in *SIPRI Yearbook 1996*.

[93] Ambassador Peter Walker quoted in "International Newsbriefs," *IAEA Bulletin* vol.39, no.2, June 1997. By 1997 (as the chapter focusing on the 1998 Indian/Pakistani nuclear tests will later argue) the momentum which had begun following the Iraqi revelations had faded. As a consequence, very few states have signed up to an ratified the Model Additional Protocol.

conclusions as to whether significant regime change did indeed follow the revelations about Iraq and how this fits with the understanding of change in regime theory generally. To reiterate, the occurrence of "significant" regime change hinges upon not simply the addition of new rules and decision-making procedures, but evidence that those rules and decision-making procedures reflect a change in some of the underlying norms and principles of the regime.

The narrative which has formed the bulk of this chapter has revealed that, according to this criteria, significant regime change did occur in the wake of the Iraqi shock. The Iraqi shock, like the Indian test explosion of 1974, provoked a divergence and then reconvergence of expectations. The reconvergence of expectations, in this case, consisted of new rules and decision-making procedures which were entrenched in new regime institutions and reflected new norms and principles. In addition, such change stood in contrast to a period of inactivity in the regime in the years previous to the revelations regarding Iraq.

In the few years prior to the Iraqi shock, it has become clear that the regime had undergone little alteration. After the revelations in Iraq, however, a serious structural elaboration of the regime occurred. In the realm of nuclear exports, the creation of the Warsaw Guidelines accompanied the expansion of the scope of the Nuclear Suppliers Guidelines. The IAEA launched its Programme 93+2, while the NPT itself was indefinitely extended in 1995.

The Warsaw Guidelines of 1992 were the first and most radical example of the new rules and decision-making procedures which followed from the Iraqi shock. For the first time, the role and potential of dual-use items in assisting a clandestine nuclear weapons programme were addressed. The Guidelines codified

the desire to withhold items which presented "an unacceptable risk of diversion"[94] The trigger list of the Nuclear Suppliers Guidelines, first agreed in the wake of the Indian test in 1977, was also expanded, presenting another instance of new rules and decision-making procedures. Finally the creation of Programme 93+2 entrenched, for the first time, the need for safeguards to detect *undeclared* nuclear programmes, as well as to inspect existing ones.

However, the regime change which occurred following the Iraqi shock was not confined to the creation of these new rules and procedures. As noted above, these new rules and procedures may be seen to have reflected a more fundamental change in some of the norms and principles of the nonproliferation regime. The norms of the regime had, with the Indian explosion, altered *inter alia* to enshrine an obligation on the part of supplier states to exercise restraint in their nuclear trade. Prior to Iraq the norms of the regime did not encompass the obligation of suppliers to take into account the potential dangers of *dual-use* technology and the possibility of such technology being used militarily. The Warsaw Guidelines and expanded trigger list required supplier states to assume a worst-case scenario not only for any recipient state's intentions but, for the first time, of non-nuclear NPT signatories. This represented an alteration in the norms of suppliers obligation although, clearly, not as radical a one as had taken place following the Indian test explosion (which led to the initial notion of supplier obligations). In addition, fundamental changes to the way in which IAEA inspections were to be conducted reflected a further normative shift. The Agency's obligations expanded to encompass not just the verification of current activities, but the detection and anticipation of clandestine activities.

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[94] *Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Material and Related*

Indeed, the whole question of clandestine nuclear programmes was brought to the fore. The belief (or principle) underlying the regime that a non-nuclear NPT signatory would not, and could not, cheat on its obligations had been well and truly shattered. The notion that NPT membership was necessarily indicative of a state's intentions – first raised following Osiraq – was dismissed. As a consequence, and as in the 1970's, the expectations of the regime's actors regarding the course of the regime had diverged and then reconverged, in the form of the establishment of the Warsaw Guidelines as well as the expanded NSG trigger list.

In addition, the beliefs and expectations that clandestine nuclear programmes were detectable through then-current IAEA safeguards was destroyed. Programme 93+2 stood as evidence of new beliefs and reconverged expectations on this subject. Clandestine programmes were now acknowledged to be both possible and needing actively to be searched out. The case of Iraq had put paid to the belief that such programmes could not evade IAEA safeguards. The resulting change to the rules and decision-making procedures reflected the shift in this principle – one which was at least as dramatic as any that had occurred following the Indian test.

Conclusions:

Iraq's invasion of Kuwait in 1990 became the patron of the changed nuclear nonproliferation regime which emerged by 1997 (with the completion of INFCIRC/540). By September of 1991, with the discovery of the "smoking gun" documents by IAEA inspectors, the ambitions and extent of Iraq's nuclear

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Technology (Warsaw Guidelines), para.2.

programme had become clear. The attempt by a non-nuclear signatory of the NPT – a signatory which was under IAEA safeguards – to develop nuclear weapons was no longer the stuff of the kinds of allegations made ten years earlier.

The activity which followed from this discovery brought substantial changes to the regime and "its lessons served to strengthen many of the regime's major components."[95] More importantly, however, these developments were not confined simply to the addition or subtraction of a few rules, but consisted (in the case of the Warsaw Guidelines and Programme 93+2) of entirely new creations. Moreover, the narrative of the years following the shock and the implementation of new rules and procedures appears to indicate corresponding changes to some of the norms and principles upon which the nonproliferation regime was previously founded. The fact that such change occurred after a period of regime inactivity again demonstrates a pattern of regime change which runs counter to the disinterest in change – or the assumption of incremental development – which characterises the approach to the subject in mainstream regime theory.

Given the depth of the regime changes which occurred, the history and prehistory of the revelations in Iraq demonstrated that the case of the Indian test explosion – and the regime change which occurred in its wake – was not an isolated incident in the history of the nuclear nonproliferation regime. Instead, it seems that the lessons which had not been learned following the bombing of Osiraq in 1981 had resurfaced a decade later, this time successfully translating into significant regime change. The circumstances under which such change occurred will now be explored.

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[95] Hans Blix, "Verification of Nuclear Nonproliferation: The Lesson of Iraq," *The Washington Quarterly,* vol.15, no.4, Fall 1992, p.65.

Chapter 7: The Iraqi Revelations of 1991 – Understanding Regime Change

The shadow of the Osiraq incident, naturally, hangs over the regime change of the 1990's, and the contrast between the reaction to the "Iraq question" in 1981 and 1991 is sharp. The significance of the Osiraq raid to the nonproliferation regime was downplayed by almost all the actors involved (excepting Iraq), resulting in no substantial change to the regime itself. However, Iraq's next foray into the international nuclear spotlight led directly to the very sort of transformative change to the regime which had previously been absent.

The years between 1991 and 1995 have been shown to have encompassed a period of dramatic change to the nuclear nonproliferation regime – change due largely to the revelations of Iraq's nuclear programme. Barely a year after the initial revelations, it was observed that "the main consequence of the war was to stimulate a major effort to improve the regime."[1] A multilateral overhaul of nuclear export criteria among supplier nations echoed the changes that had followed the Indian test two decades previous, this time without the reluctance which had characterised the initial suppliers group negotiations. In addition, the events in Iraq inspired significant change in the IAEA which had, ten years earlier, ardently denied Israeli accusations of safeguards deficiencies. Such changes to the rules and procedures of the regime, however, have been demonstrated to have reflected more fundamental changes to the underlying norms and principles.

The goal remains of how best to understand why this shock inspired such activity in 1991, particularly as opposed to 1981. Like the Osiraq case, and unlike the

[1] Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War," p.106.

Indian case, there was no completed act of proliferation – no test nor even a fully assembled weapon. Nonetheless, the following discussion shows that the interpretation of the shock of 1991 more closely resembled that following the Indian test than that inspired by the bombing of Osiraq. It will be maintained that the shock revealed a danger to the regime by undermining its credibility and serving as a warning of what was potentially to come. It also inspired an acceptance, in the key actor(s), of responsibility for creating the conditions for the shock to occur and, more importantly, for leading the regime change deemed necessary. Furthermore, there was a general belief, among the relevant actors, in the need for immediate action and thus a corresponding belief that no other interest took precedence over bringing about such change. Finally, the problems revealed by the shock were understood as ones to which workable solutions could be found and implemented.

Such interpretations mirror those which eventually followed the Indian test of 1974 and which likewise led to a rapid development of the regime. This said, the two cases differed significantly. The changes to the regime following the Indian test depended ultimately upon the will of the United States that change was needed and must be forced through, despite the objections of the European suppliers, in particular. The post-Gulf War shock, however, saw the impetus for change infuse not only the US, but also those who were previously reluctant to alter the status quo. As a consequence, it will be argued that the shared understandings of danger, responsibility, and immediacy made it possible for solutions to the problems raised to be both identified and acted upon. Indeed the near-total lack of conflict between the interpretations of the Iraqi shock meant that regime change could be even more dramatic than that inspired by the Indian test.

The Understanding of Danger:

The extent of Iraq's nuclear ambitions, in contrast to the accusations made by Israel ten years earlier, was this time not debatable. Consequently, the answer to the question of what the shock 'meant', for the actors involved and for the regime, was much more straightforward. It was agreed by the IAEA, the United States, and most of the rest of the international community that an Iraq with active nuclear aspirations, let alone nuclear weapons, was a dangerous thing.

Such a conclusion is, in itself, insufficient for helping to understand the decision to embark on significant changes to the regime. The belief that a nuclear-armed Iraq was a danger which had to be prevented was necessary as a starting point. If the conclusion that the Iraqi nuclear programme was a danger remained limited to that, however, little reason could exist for initiating a series of multilateral discussions and negotiations aimed at regime change. The conclusion that only Iraq's ambitions must be suffocated would be far more likely to be limited to condemnation of Iraq's actions and sanctions against it. However, the danger revealed went beyond Iraq itself, and there was a palpable concern that there may be "other Iraqs, that is, countries successfully hiding nuclear material that they should have declared and placed under international safeguards."[2] It was observed that the

> NPT was shown to have been ineffective in restraining Iraq's quest for nuclear arms, raising questions about the utility of the pact as a curb on proliferation elsewhere in the region.[3]

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[2] Blix, "Verification of Nuclear Nonproliferation," p.58.

[3] Leonard S. Spector "Nuclear Proliferation in the Middle East – the next chapter begins," in Efraim Karsh, Martin S. Navias, Philip Sabin (eds.), *Non-Conventional Weapons Proliferation in the Middle East: Tackling the Spread of Nuclear, Chemical and Biological Capabilities*, (Oxford: Clarendon Press; 1993), p.135.

Iraq had revealed serious problems which – in order to reassert the regime's credibility – required correction. The danger implied by the shock, in other words, lay in the understanding of Iraq as the thin end of a wedge.

Understanding of danger – United States

This crucial understanding of the danger was one which was evident among the actors most actively involved in bringing about change. These actors, as in the Osiraq case, were the United States, the IAEA and, to a lesser but still important extent, the other supplier states (particularly the former West Germany). Following the revelations, all held in common the view that "Iraq's deliberate efforts to circumvent the NPT, and the inability of the IAEA to detect these violations, have shaken confidence in the accord as a mechanism for constraining...nuclear activities."[4] In the United States the fear of the Iraqi threat was also clearly linked with the fear of the possibility that other states, similarly hostile to America, might eventually succeed in their quest for a nuclear capability in spite of IAEA safeguards or NPT membership.

As in the Osiraq case, Congressional hearings were peppered with such concerns. What appeared to differ in 1991, however, was the extent to which Congressional concerns complemented those in the Administration and the State Department. Whereas before, the State Department and Administration had visibly downplayed the concerns of Congress, this time all appeared equally alarmed by the disclosures about Iraq's nuclear programme.

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[4] Ibid., p.156.

Not only was the will to disarm Iraq shared, but "calls for finding the means of avoiding such occurrences in the future were strong and immediate."[5] Those who had previously been strong supporters of nonproliferation initiatives, such as Senator Glenn, declared that Iraq had revealed nuclear proliferation to be "the gravest national security threat we face today...[and that]...this threat will shape our national security, foreign policy and intelligence agenda for years to come."[6] The determination was also expressed, and met with widespread agreement, that the United States "must learn from this experience so that we can prevent any other nation from pursuing the path of Saddam Hussein and posing such dire threats to others."[7] One hearing even went so far as to declare the necessity of focusing not only on the lessons learned from Iraq, but on "how to prevent a similar incident from recurring in the future."[8] The interpretation of the shock not simply in the context of Iraq, but with reference to other potential proliferators, pervaded such hearings, hinting strongly at the desire to take wider initiatives than the simple disarming of Iraq.

This time, and in marked contrast to the Osiraq case, those expressing such sentiments were in agreement with President Bush, who stated that "[nuclear] proliferation would jeopardize the common defense and security of the United

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[5] Kokolski, *Technology and the Proliferation of Nuclear Weapons*, p.97.

[6] *Proliferation Threats in the 1990's*, Hearing Before the Committee on Governmental Affairs, United States Senate, One Hundred and Third Congress, first session, February 24th, 1993, p.1.

[7] *Nuclear Proliferation: Learning from the Iraq Experience*, p.2 (speaker: Senator Pell.) Such affirmations, and the resolve to discover "whether other nations have emulated Iraq" (Senator Roth, in *Proliferation Threats in the 1990's* p.50) were typical of the rhetoric throughout the hearings on the subject. Such rhetoric was underscored by such documents as the annual report to Congress by the Arms Control and Disarmament Agency, which expressed its wider concern that "Iraq's unsafeguarded clandestine nuclear activities have also served to remind the international community that adherence to nonproliferation treaties alone may not suffice as proof of a state's good faith." (in *US ACDA Annual Report to Congress 1991*, p.104.

[8] *Iraq's Nuclear Weapons Capability and IAEA Inspections in Iraq*, Joint hearing before the Subcommittees on Europe and the Middle East and International Security, International Organizations and Human Rights of the Committee on Foreign Affairs, House of Representatives, One Hundred and third Congress, first session, June 29, 1993, p.1.

States."[9] This was underscored later with a statement to the press expressing the Administration's determination, in an obvious reference to Iraq and other hostile states, "to combat the proliferation of weapons of mass destruction, particularly to regions of instability."[10] The prime regions of instability which concerned the US were the Middle East and East Asia, and the consensus appears to have been that Iraq was far from an isolated threat. As the previous chapter noted, the Administration tended, if anything, to overemphasise the wider danger. Secretary of Defense Cheney, for example, went on record as declaring that no fewer than nine countries were close to getting nuclear weapons.[11] It was maintained by one former government official (and supported by statements such as those above) that "while aspects of the Iraqi case are unique, it is widely acknowledged that several states in the Middle East, notably Algeria, Iran and Libya, are moving towards a nuclear capability, as is North Korea."[12] There was grave concern that other non-nuclear NPT signatories might follow Iraq's example.

The Congress and Administration were thus far more in accord on the danger, posed both by Iraq and by potential copycats, than they had been when the question had first been forcefully put ten years earlier. The common belief existed that Iraq's

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[9] "Letter to Congressional Leaders on Nuclear Cooperation with EURATOM," March 8, 1991, in *Public Papers of the Presidents of the United States – George Bush, 1991 Book I,* (Washington, D.C.: US Government Printing Office; 1992), p.231.

[10] "Statement by Press Secretary Fitzwater on Restrictions on US Satellite Component Exports to China," April 30, 1991 in *Public Papers of the Presidents of the United States: George Bush, Book I,* p.446.

[11] BBC World Service, (7:00am GMT, 14 January 1992), quoted in David Fischer, "Nuclear non-proliferation: the prospects for the non-proliferation regime after the Gulf War" *Energy Policy,* vol.20, no.7, July 1992. This over-emphasis on the part of Cheney is noted by Fischer, who writes that "even a worst case analysis would have difficulty getting beyond six: Algeria, Iraq, Iran, India Pakistan and North Korea and for various reasons it is very dubious whether any of the first three are now within sight of nuclear weapons." (p.681, footnote 1).

[12] Deutch, "The New Nuclear Threat," p.120. John Deutch was the former Under Secretary of the US Department of Energy. The DOE, of course, later came under heavy fire from Congress about its role in Iraq's programme and its trade and export standards generally.

actions had both damaged the regime's credibility and raised the spectre of further proliferation on the part of other, officially non-nuclear, states. In this it bore greater resemblance to the (eventual) interpretation, following the Indian test, of the danger posed. Indeed, on this occasion such an interpretation occurred with significantly less need for Congress to convince the presiding Administration of the accuracy of its point of view.

Understanding of danger – the IAEA

The acceptance of the wider dangers exposed by the shock was evidenced from changes in the IAEA safeguards system. The 93+2 programme and Model Additional Protocol had implications far beyond Iraq. The IAEA's understanding of the danger was not confined to one violator, but recognised the ominous implications for the wider regime. The problems exposed in one area were considered not only to have undermined the credibility of the present safeguards system, but also to indicate others, or the threat of others, in the future.

Evidence can be found in the rhetoric of IAEA officials in the period following the revelations in Iraq. The fact that a member state had, contrary to its agreement, attempted to use peaceful assistance for military ends was undeniable. As one article discussing the safeguards changes later noted:

> the failure to address adequately the possibility of undeclared nuclear activities totally separate from safeguarded activities, as revealed in Iraq have been seen as a major shortcoming, and expectations have changed accordingly.[13]

The IAEA's interpretation of the 1991 Iraqi shock was very different to that of ten years earlier. In the case of the Osiraq bombing there was a perceived overreaction to the shock, particularly in the American Congress, and it was this

overreaction which had been seen within the IAEA as the real danger to the Agency's credibility. Following the Gulf War, however, the danger was accepted as stemming from the reality of the shock itself, and not merely the reaction to it. Certainly, the uniqueness of Iraq was noted and accepted. One IAEA official correctly observed that "Iraq's vast oil wealth relative to its small population, and its large pool of Western-educated scientists and engineers, have made that country a particularly tough case of WMD proliferation."[14] Nonetheless, and as Director-General Blix noted in a statement to the General Conference, "the case of Iraq demonstrated that nuclear activities which should have been declared but were kept secret, could go undetected by the safeguards system as it was designed."[15]

Blix further noted that "the Agency is strengthening its nuclear verification system to increase the probability of detecting violations, drawing on the lessons of Iraq."[16] The concerns of the IAEA did not end with Iraq, but rather began with it. One former IAEA employee observed that "initially IAEA safeguards were introduced to make sure that peaceful nuclear activities were not misused. But now we've seen that this assumption was not right in Iraq and it may not be correct anywhere else."[17] Still more significant was the testimony before the US Senate by

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[13] Carlson, Bragin, Bardsley and Hill, "Nuclear Safeguards as an Evolutionary System," p.110.

[14] Jonathan B. Tucker, "Monitoring and Verification in a Noncooperative Environment: Lessons from the UN Experience in Iraq," *The Nonproliferation Review,* vol.3, no.3, Spring/Summer 1996. David Fischer later concurred, although he noted that while Iraq was a very specific case, "it would be dangerous to assume that there will be no more like Iraq." (Fischer, *History of the IAEA,* p.678.)

[15] Dr. Hans Blix, Director General, International Atomic Energy Agency, C19, "Statement to the 36th Session of the General Conference of the International Atomic Energy Agency 21 September 1992" (Vienna: IAEA; 1992) p.16.

[16] *IAEA Press Release,* 21 October 1992, PR92/37. The press release deals with the address to the UN General Assembly by Dr. Blix on the same date.

[17] "Preventing the Proliferation of Nuclear Weapons and Strengthening the Non-Proliferation Treaty," in *Disarmament – New Realities: Disarmament, Peace-Building and Global Security [excerpt from the panel discussion organized by the NGO Committee on Disarmament, Inc., at a conference held at the United Nations in New York, 20-23 April 1993]* (New York: United Nations; 1993), p.219 (Speaker:

David Kay, the IAEA's chief inspector in Iraq on the September inspection which had uncovered the incriminating documents and which made clear the extent of the Iraqi programme. Kay explicitly drew implications for the credibility of the regime and its future when he asked "what does this [the revelations in Iraq] say about other NPT countries such as Iran or non-NPT countries such as Libya? What secret multi-billion [dollar] nuclear weapons programs are underway in those countries?"[18]

The IAEA thus came to interpret the danger of Iraq in a similar manner to the United States. Both saw the shock as having revealed serious problems both in itself and as a portent of things to come. The fact that the IAEA did not confine its activities merely to inspecting and dismantling Iraq's nuclear capability, but advocated a wide-ranging reform of the safeguards system, supports such an appraisal. Programme 93+2 was even identified as evolving out of a desire to be able to detect clandestine activity "if another State tried to follow the example of Iraq."[19] An IAEA publication on the changes to nuclear safeguards, albeit written in 1998, identified IAEA determination, in the light of the Iraqi revelations, "to reduce the risk that other States might be able to undertake clandestine programmes."[20]

Understanding of Danger – elsewhere

The understandings in the key supplier states (particularly Germany) of what Iraq had attempted to do manifested themselves most obviously in terms of their interpretation of their own responsibility and the immediate need for action. The full

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Ben Sanders, at the time the Executive Chairman of the Programme for Promoting Nuclear Non-Proliferation).

[18] *Nuclear Proliferation: Learning from the Iraq Experience*, p.27 (speaker: David Kay).

[19] Fischer, *History of the IAEA*, p.295. Although this is, strictly speaking a secondary text, the author's past career in the IAEA, as well as the fact that the book itself is an IAEA publication, may be argued to correctly identify general IAEA interpretations of the shock.

participation of Germany, France and other states in the reanimated NSG, reflected a belief in those states that not only must Iraqi ambitions be halted, but that other states may have similar desires which must also be thwarted by changing the regime itself – in this case, the export control component of it. Germany was identified, in the wake of the Iraqi revelations, as having "become very interested in an international agreement to reinforce export controls"[21] – a determination which suggests an anxiety not only that the shock itself had damaged the integrity of the regime, but that danger also lay in the apparent exposure of a path by which others either were proliferating or intended to do so.[22] France, too, reinvented itself as a concerned supplier, "determined to demonstrate its readiness to co-operate internationally for non-proliferation purposes."[23]

In addition to these two suppliers, and as discussed in the previous chapter, the P-5 states in the UN Security Council displayed a unity of purpose which was unlike anything which had been seen in that body before. It was observed, for example, that "had the Cold War not ended, it is at least questionable whether the Security Council would have reached agreement on measures for eliminating Iraq's nuclear weapon potential."[24] Certainly, such harmony was reflected in an apparently shared acceptance of the danger posed by the revelations in Iraq. Although Security Council Resolution 687 focused on Iraq's non-compliance and the solutions which

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[20] *The Evolution of IAEA Safeguards*, p.19.

[21] Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War," p.97

[22] The shock of Iraq, of course, came at a time when German attitudes to nuclear export policy were filled with growing unease following, for example, the Hempel case and the NTG/PTB revelations. See Müller "After the Scandals: West German Nonproliferation Policy," PRIF Reports no.9, Peace Research Institute Frankfurt, (Frankfurt am Main: February 1990), and Eric Chauvistré, "Germany and Proliferation: the Nuclear Export Policy," Arbeitspapiere der Berghof-Stiftung für Konfliktforschung Nr. 43 (Berlin: Berghof-Stiftung für Konfliktforschung; 1991).

[23] Ibid., p.97.

were to be implemented, it also stated that the Security Council was, in a broader sense, "conscious of the threat that all weapons of mass destruction pose to the peace and security in the area."[25] Certainly, the stated willingness of the Security Council to vouch future support for the IAEA was indicative of the shared belief that the disarming of Iraq had not, in itself, solved the problems raised after the Gulf War. However, it should be noted here that the wide-ranging safeguards reforms required the cooperation of all non-nuclear NPT signatories. Thus, the recognition of danger had to go far beyond supplier states and the UN Security Council.[26]

Conclusions regarding the understanding of danger

The awareness of what Iraq had attempted to do, and exactly how close it had come to being successful, spawned a broad consensus within the United States, the IAEA, the UN Security Council and the rest of the international community. Unlike in the aftermath of the Osiraq bombing, the American Congress found itself in agreement with the State Department and Administration. All were concerned not simply by the shock itself but – crucially in terms of its necessity for regime change – the way in which the Iraqi rejection of its NPT obligations had damaged the credibility of the regime and revealed what could potentially be achieved by apparently reputable participants. In this, the reactions more closely resembled the eventual response to the 1974 Indian test explosion. Unlike the case of the Osiraq bombing, the IAEA this time interpreted the danger of the shock as stemming not from external overreactions to the event, but from the event itself. As in the United

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[24] Fischer, *History of the IAEA*, p.305.

[25] UN Security Council Resolution 687, preamble in Kokolski, *Technology and the Proliferation of Nuclear Weapons*.

States, a conception of the shock as an omen of things to come was also evident, bringing the two into accord.

Finally, there are indications of a similar assessment in Iraq's major suppliers and the abnormally unified P-5 of the UN Security Council. There is again a contrast with the unwilling, even non-existent participation in the NSG following the Indian test, and the discord in 1981. Again, change to the regime, rather than merely changes to relations with Iraq, point to a fear of Iraq as symptomatic of wider problems in the regime. This brought the states' assessments into line (immediately this time) so that establishing the consensus for regime change was not the uphill battle that it had been previously.[27]

The Understanding of Responsibility:

In the cases of India and Osiraq, the acceptance of responsibility, or lack of it, was a significant element in the outcome. In the Indian test, the main author of regime change (the United States) became convinced of its own responsibility for initiating and leading the necessary changes to the regime. Following the Osiraq shock, however, the actors directly affected by the shock accepted neither responsibility for indirectly creating the shock nor responsibility for instigating change. The one exception was the American Congress, which called for American

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[26] This near-universal concern found its way, for instance, into the 1995 Principles and Objectives – one of the three documents which emerged from the 1995 NPT Extension Conference.

[27] In the Indian case, of course, the United States Administration had to be persuaded of the danger to the regime by Congress, and then had to persuade others of that potential danger. As will be discussed in the concluding chapter, such a delay embodied the leap from the belief that while the Indian test was, in itself, not directly threatening, a significant danger lay in the threat of imitation by other, hostile nations. In the case of Iraq 1991, however, the proliferator, Iraq, was itself was actively hostile to the West, perhaps allowing for a clearer understanding of why the alignment between the United States and other suppliers (especially the formerly recalcitrant Germany and France) suffered no delay this time. Lawrence Freedman alludes to the contrast between the indirect threat of the Indian test and the more 'direct' danger of the Iraqi 1991 case in "The 'Proliferation Problem' and the New World Order," in

leadership to alter the regime, but was unable to convince the State Department or Administration of the necessity. In the post-Gulf War environment, the desire for regime change was, as in the aftermath of the 1974 Indian test, couched frequently in terms of liability. However, in the wake of this shock, this was evident not simply in rhetoric of the United States, but also in the IAEA and the other suppliers. Questions were raised about the adequacy not only of nuclear export policies, but of safeguards, inspections procedures, and intelligence gathering and sharing. As was previously observed of the 1974 shock, it is difficult to countenance how change to the regime could have been enacted without finding evidence of a pervasive sense of accountability for fixing past mistakes and, more importantly, for leading the changes necessary to prevent future ones.

The United States

In the US, Congressional hearings were again rife with discomfort over the American role in indirectly aiding Iraq in its quest for nuclear weapons or at least, in not doing nearly enough to frustrate it. The first hearing on the subject dealt explicitly, almost exclusively, with the alleged failure of various areas of government, in particular the DOE, to prevent Iraq's near success. The Subcommittee on Oversight and Investigations, focusing on the question of Iraq, rounded on the DOE. Its Chairman declared that

> the DOE appears to have left open an even larger avenue toward the development of the bomb, nuclear proliferation. This is unacceptable. The DOE must be a leading force in efforts by this government to prevent proliferation.[28]

Efraim Karsh, Martin S. Navias, and Philip Sabin (eds.), *Non-Conventional Weapons Proliferation in the Middle East,* p.164.

He went on to censure the "failure of the DOE to issue a DOE order...to control sensitive information may have helped Iraq's nuclear weapon program."[29] The DOE, even admitted partial responsibility for aiding Iraq by not warning the Secretary of State, despite growing internal concerns regarding Iraq's intentions. The Director of the Office of Classification recalled that

> the Intelligence Office [of the DOE] did not believe that the information they or we had justified escalating the matter within the DOE. The Intelligence Office also disagreed with the policy recommendation. We could therefore not reach agreement on a meaningful document to go to the Secretary.[30]

Such sentiments pervaded both Congress and the Administration. Senate hearings in October of 1991, for example, paid particular attention to the role of American companies in providing technology for export to Iraq.[31] Following the testimony of Dr. Blix, it was declared to general approval that "the US has to play a leadership role in helping to give the IAEA added powers and resources."[32]

Congressional belief in the necessity of American leadership was not terribly different from that which emerged following the bombing of Osiraq, although it went beyond the IAEA-bashing which had occurred ten years previously. The sense that the United States had been partially at fault – had contributed to Iraq's nuclear

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[28] *Nuclear Nonproliferation*, p.2 (speaker: Congressman Dingell, chairman). The hearing was initially classified, but was declassified in April 1992 by the DOE with information that was still deemed sensitive deleted.

[29] Ibid., p.2.

[30] Ibid., p.35. Evidence of these growing concerns within the DOE (which were not acted upon) was provided in the testimony of former Secretary of Energy Watkins who, in a letter to the Chairman dated March 19th, 1991, recollected that "during my first few months as Secretary of Energy it became clear that DOE's intelligence program was not effective, not well known or respected in the Intelligence Community, and not responsive to Departmental need." (p.445).

[31] DuPont came under particular scrutiny by the Senate, and the hearings contain a reprinting of an article in the *New York Times* which proclaimed as its headline that "Dupont says US Cleared Export of Item Used in Iraqi Bomb Effort" (12 December 1991). See *Nuclear Proliferation: Learning from the Iraq Experience,* pp.57-58.

program – had deepened. The DOE had shown itself to have been complacent over the Iraqi proliferation threat and to have revealed sensitive information, while the Department of Commerce came under fire for the issuing of certain export licences.[33] Such interpretations gained strength following the initial hearings and extended beyond Congress.

In the two hearings dealing with nuclear proliferation in 1993, this feeling of accountability had, if anything, increased. Assertions regarding American responsibility for the nonproliferation regime in the wake of Iraq were typified by declarations to the effect that "it is evident that the United States must now take the lead."[34] Underlying such proclamations was a tangible sense of anger, not only over the DOE's bungling but over American support for Iraq in the 1980's. John Deutch – the former Under-Secretary of the DOE – admitted in an article that "the failure of American policymakers to receive or believe realistic assessments of the Iraqi threat was undoubtedly influenced by Iraq's political role as a counterweight to Iran and Syria."[35] This past calculation of Iraq's utility was identified in the discussion of Osiraq as one basis for American inaction, underscored the sense of US responsibility for the shock on this occastion. The rueful remembrance of one Congressman was that "we thought we could use Saddam Hussein...we wanted to play off the Iranians or others in the area."[36] Another referred to "the palpable failure of our Government to pull together a coherent policy with respect to Iraq."[37]

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[32] Ibid., p.38 (speaker: Senator Pell).

[33] When quizzed, CIA Director R. James Woolsey reluctantly admitted that "there certainly have been some instances of American companies having been involved." (*Proliferation Threats in the 1990's*, p.33.) Despite Woolsey's stated conviction that European companies carried most of the guilt on this score, the admission nonetheless elicited a goodly amount of hand-wringing from the Senators present.

[34] Ibid., p.49.

[35] Deutch, "The New Nuclear Threat," p.128.

These perceived past failures by the government were not only recognized in Congress. Admissions by the DOE and CIA of inadequacies in intelligence gathering and assessment were freely acknowledged by the Administration itself. In contrast to the rejection of responsibility for any aspect of the Osiraq incident, the Assistant Secretary of State this time informed the House of Representatives that "before the end of the Gulf War, our intelligence community and the intelligence communities of others in the West, had focused on Iraq's nuclear program [in the wake of the Osiraq shock]. And it is clear, in retrospect, that they got it wrong."[38] The Administration, moreover, implicitly recognised the existence of flaws in American nuclear export standards when acknowledging to Congress the role of American companies in exporting equipment to Iraq and thus aiding the Iraq bomb project. In January 1992, a letter from the Administration to Congress stated:

> We have received from UNSCOM a preliminary list of US company names whose equipment has been seen in Iraq by UN inspectors. We provided this list, on a confidential basis, to investigative agencies and appropriate congressional committees.[39]

Such admissions were restated in the press, which made much of American culpability. This ranged from simple reports of the involvement of American companies in Iraq's atomic program[40] to the wailing and gnashing of teeth which

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[36] *Iraq's Nuclear Weapons Capability and IAEA Inspections in Iraq*, p.12 (speaker: Congressman Sam Gejdenson).

[37] Ibid., p.42. The speaker, Congressman Lantos went on to rail against "Western failure and irresponsibility...during the decade of the 1980's", p.42. This is, of course, the same Congressman Lantos who, during the aftermath of the Osiraq incident, had called on the government to focus on the bigger picture of the Cold War, and not be distracted by the "momentary sideshow" in the Middle East. (See *The Israeli Air Strike,* Hearings before the Committee on Foreign Relations, United States Senate, Ninety-seventh Congress, first session, June 18, 19, and 25, 1981, p.202.)

[38] *Iraq's Nuclear Weapons Capability and IAEA Inspections in Iraq,* p.6 (speaker: Robert L. Gallucci, Asst. Secretary of State).

[39] "Letter to Congressional Leaders Reporting on Iraq's Compliance with United Nations Security Council Resolutions, 14 January 1992," in *Papers of the Presidents of the United States: George Bush, 1992-1993, Book I*, p.463.

followed the publications of the hearings which focused on the role of the DOE. Iraq's ambitions were cited in editorials as having been "silenced within the Federal bureaucracy nearly two years before the West went to war against Iraq and its atomic complex."[41] Previous US policy towards Iraq was attacked with claims that "warnings and plans were dismissed by Energy Department superiors, who knew of Washington's long tilt towards Iraq as a counterbalance to Iran in the Persian Gulf region."[42] The Administration itself was even accused of complicity in questionable exports to Iraq, with headlines such as "US Tolerated Iraqi Fronts."[43] The conviction that the United States had made a significant contribution, both directly and indirectly, to the Iraqi nuclear effort, found a significant level of support throughout the political elite in Washington.

The IAEA

It is evident that the reaction of the IAEA in 1991 was markedly different from 1981. The unequivocal fact of Iraq's successful attempts at circumventing its NPT and safeguards obligations made the denial of this danger all but impossible. However, it was the acceptance of responsibility for the shock in which the reaction of the IAEA diverged most sharply from that of 1981. The post-Osiraq defensiveness within the IAEA bureaucracy in response to sustained attacks on its capabilities was,

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[40] See, for example, *The Wall Street Journal,* 12 December 1991, which reported that "Iraq used equipment from German, Swiss and US companies in its secret program to build a nuclear bomb."

[41] *The New York Times,* 20 April 1992.

[42] Ibid. The accusations that American support of Iraq blinded it to the realities of Iraq's nuclear ambitions, were frequently reiterated. A month later, it was bluntly asserted in an editorial that "Americans now know that the war in the Persian Gulf was brought about by a colossal foreign-policy blunder: George Bush's decision, after the Iran-Iraq war ended, to entrust regional security to Saddam Hussein." (*New York Times,* 18 May 1992).

[43] *The Washington Post,* 11 August 1992.

after a brief delay, replaced by public admission of inadequacies and determination to enact change to the safeguards components of the nonproliferation regime.

The author of the Agency's official history (published after the most substantial changes to the IAEA had occurred) observed that, in the period following the revelations, "there was no doubt that a fundamental review and redirection of the existing safeguards system was essential."[44] After a brief internal battle between traditionalists and reformers within the Agency rapid regime change occurred in concert with admissions of liability and acceptance of the need for change.

One of the most significant admissions of the IAEA's inadequacy came in an article written by the Director-General. He cited the case of Iraq as "a reminder of some of the limitations of the present safeguards system" and admitted that "the ability of Iraq to construct and operate undeclared uranium enrichment facilities without detection highlighted a weakness in the system."[45] Nonetheless, the Agency's admission of its weaknesses and limitations were a far cry from the vitriol which infused the American press, resulting in the dismissal of IAEA safeguards as "grossly inadequate."[46] In comparison with previous reactions by the Agency to any criticisms of safeguards, such admissions were nevertheless significant.

The tenor of the relevant articles in the IAEA Bulletin were also very different from those which had previously examined Iraq's ambitions. In contrast to the defensiveness which characterised articles written by H. Gruemm in the wake of Osiraq, the interpretation of events by the Agency's Department of Safeguards was

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[44] Fischer, *History of the IAEA,* p.285.

[45] Blix, "IAEA Safeguards: New Challenges," p.34.

[46] *The International Herald Tribune,* 19 March 1992. The same newspaper also ran an editorial late the previous year which noted that "that IAEA did the best it could – which wasn't much." (*International Herald Tribune,* 18 October 1991). British newspapers, generally speaking, were no more generous in their assessment of the Agency. See, for example, *The Times,* 17 July 1991; *The Daily Telegraph,* 25 September 1991; *The Independent,* 21 March 1992.

much more reflective. Whereas post-Osiraq attacks on the IAEA were rejected as a product of media ignorance, the shaken post-Gulf War IAEA was eventually prepared to adopt a much more conciliatory tone. The first such confession of inadequacy came early in 1992, with an article whose title, "Strengthening the international safeguards system", indicated the determination of the IAEA bureaucracy to initiate change. The article's authors, one of whom had famously and publicly rejected concerns over Iraq prior to the Gulf War, stated that

> Iraq's non-compliance with the provisions of its safeguards agreement with the IAEA, and the magnitude of its undeclared nuclear weapon development programme, have forcefully underlined the fact that the safeguards assurances presently provided by the IAEA...alone are insufficient.[47]

In addition, Gruemm's successor as the Deputy Director-General of Safeguards, Bruno Pellaud, proclaimed that "the case of Iraq exposed some apparent weaknesses of the INFCIRC/153 system."[48] The article made no mention of attacks on the Agency from outside, but did go on to accept IAEA responsibility. Pellaud wrote that:

> in reviewing the Iraqi experience, it is clear that Agency safeguards did not provide adequate assurance that States subject to comprehensive safeguards agreements would submit all nuclear materials to safeguards or that undeclared operations were not carried out in facilities that were submitted for safeguards.[49]

The IAEA, then, accepted its own role in Iraq's increasingly successful attempts at attaining nuclear weapons. In addition, there is evidence of a willingness

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[47] Jennekens, Parsick, and von Baeckmann "Strengthening the international safeguards system," p.6. It was Jennekens who had, only a few months before the outbreak of hostilities in the Gulf, declared Iraq to be in compliance with its NPT obligations (see Kokolski, *Technology and the Proliferation of Nuclear Weapons,* p.101).

[48] Bruno Pellaud, "Safeguards in Transition: Status, challenges, and opportunities," *IAEA Bulletin*, vol.36, no.3, 1994, p.4.

to be proactive in reforming safeguards. Self-congratulatory tones of the Department of Safeguards towards the end of the 1990's were predicated on the Agency's recognition that the case of Iraq had "demonstrated vividly the serious limitation of the ability of the IAEA safeguards system to detect possible **undeclared** nuclear activities."[50]

Supplier States

The crucial role played by nuclear exports to Iraq by non-American suppliers became evident with the uncovering of both what Iraq had attempted to do and how it had managed to achieve its partial success. It became apparent that the primary offenders in this regard had been German suppliers, although it was rightly noted that "with Germany heading the list, practically all technologically advanced countries had contributed to Iraq's concentrated effort."[51] It will be recalled that following the Indian test explosion, West Germany had played an actively obstructive role insofar as negotiations for multilateral agreements on nuclear exports was concerned. This, combined with the fact that "the Iraqi program was greatly assisted by transfer of sensitive technology through trade, mostly from Germany,"[52] rendered the German understanding of responsibility worthy of consideration. The corresponding interpretation by France – given its previous role as key nuclear supplier to Iraq and vocal critic of Israel's 1981 accusations – is also of interest.

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[49] Ibid., p.6. Again, the contrast with the claims of Gruemm ("it is to be doubted that the effectiveness of IAEA safeguards are really the weak link in this interaction", in "Potential and limitation of international safeguards," *IAEA Bulletin Supplement* 1982, p.43) is highly visible.

[50] IAEA Department of Safeguards and the Division of Public Information, *The IAEA's Safeguards System: Ready for the 21st Century,* (Vienna: IAEA; 1998), p.4.

[51] Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War," p.97.

[52] Deutch, "The New Nuclear Threat," p.126.

As was noted in the previous chapter, German concerns regarding the standards of its nuclear exports had, prior to the Gulf War, increased in the wake of several scandals. Nonetheless, only months before the outbreak of hostilities in the Gulf, it was declared that West Germany "stands out as the undisputed number one as far as the...apparent reluctance of the country's political leadership to take energetic corrective action are concerned."[53] The reaction to the shock of Iraq, appears to have cemented the growing domestic sense of responsibility for nuclear nonproliferation and for corrective action, in a way which far outstripped the uneasy rumblings which preceded it. At the reconvened NSG, Germany was not merely behaving in an unobstuctive manner, but rather in a positively helpful fashion.[54] The IAEA benefited, too, with inspectors receiving information from the German government detailing what it had sold to Iraq.[55] Such actions indicate an acceptance of responsibility for helping to bring about the danger created and a desire actively to assist in developing the regime in whichever way was considered necessary. Indeed, the government itself explicitly admitted liability to the US State Department, which was able to observe in an official statement before a Congressional hearing that "the German Government has acknowledged that German companies account for a sizable number of items discovered in Iraq's WMD programs."[56] As one commentator stated,

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[53] Müller, "After the Scandals: West German Nonproliferation Policy," p.15. The report was published in February, 1990.

[54] For example, it was declared that "Germany, one of those states previously reluctant to stiffen restrictions had become very interested in an international agreement to reinforce export controls." (See Müller, "The nuclear non-proliferation regime beyond the Persian Gulf War ," p.97.) This change of heart following Iraq would seem to point to some sort of an acceptance of responsibility for taking initiative.

[55] An IAEA press release applauded German aid, remarking that "the initiative of the German government has greatly assisted the ongoing inspection effort with regard to the Iraqi centrifuge programme." See IAEA Press Release PR 92/4, 17 January 1992.

[56] *Iraq's Nuclear Weapons Capability and IAEA Inspection in Iraq,* p.10. Another key declaration of responsibility occurred in January of 1992, when a German Foreign Ministry spokesman was quoted as admitting that "the government has information showing that before the Gulf war, several major

accurately it appears in light of the admission of liability and the nonproliferation initiatives subsequently taken:

> in the aftermath of the Gulf War, the evidence that a number of German companies had sold Iraq the technology, parts and advice it needed for its various programs of mass-destruction weapons lent greater urgency to the voices of those who both at home and abroad were clamouring for tightening of the country's still-weak export-control legislation.[57]

Similarly, it was likewise proposed that "unlike any other crisis before, the Gulf War and its aftermath have sharpened France's awareness of the perils of its theretofore highly permissive nuclear export policy."[58] France's role as the major supplier of Iraq's nuclear program had ended with the bombing of Osiraq. Nonetheless, the denials of wrongdoing – which had been made in response to the shock of 1981 – were noticeably absent. As with Germany, France's whole-hearted participation in the NSG implies a determination to be one of the authors of the new multilateral nuclear supply standards.

This was equally, if not more true, of the United Kingdom. The revelations that British companies had been implicated in Iraq's supergun effort led to the Scott Inquiry and was particularly embarrassing for a state which (like Canada after the 1974 Indian explosion) "traditionally held an image of itself as being at the forefront of global non-proliferation efforts."[59] The vigorous participation of the UK in the suppliers group negotiations – in the wake of Iraq – becomes still more

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German firms supplied ring magnets and casings which could have put Iraq in a position to build and operate a large number of gas centrifuge uranium enrichment installations." The spokesman stated that criminal proceedings against these firms were underway. (*International Herald Tribune,* 15 January 1992).

[57] Alexander Kelle "Germany," in Harald Müller (ed.) *European Non-proliferation Policy 1988-1992,* (Brussels: European Interuniversity Press; 1993). p.112.

[58] Phillipe Richard, "France," in *European Non-proliferation Policy 1988-1992,* p.83.

[59] Darryl Howlett, "United Kingdom," in Müller (ed.), *Nuclear Export Controls in Europe*, p.55.

understandable when viewed in this light (echoing the whole-hearted support of American initiatives by Canada after the events of 1974).

Conclusions regarding the understanding of responsibility

The Iraqi revelations of 1991 prompted a very different assessment, in terms of responsibility, than they had ten years previously. The United States government, in contrast to the two previous cases, was unanimous from the start in its assessment of American responsibility and the need for American leadership. There was, on this occasion, no need for Congress to persuade the Administration and State Department of its point of view. In the IAEA, the contrast with the Osiraq incident is perhaps the sharpest. The defensiveness which characterised the reaction in 1981 was gone and there soon emerged a conciliatory tone from both the Department of Safeguards and the Director General, which acknowledged flaws in IAEA procedures and the need for change. Finally, key suppliers displayed a determination and willingness to introduce changes to multilateral nuclear supply standards while accepting liability for assisting Iraq's nuclear effort. As a result of this unusual level of international agreement, a declaration could be made following an international economic summit that "the responsibility to prevent the re-emergence of such dangers [of weapons proliferation] is to be shared by both arms suppliers and recipient countries as well as the international community as a whole."[60]

Understanding of Immediacy:

The changes made to the nonproliferation regime after the Iraqi revelations stood in contrast to the inactivity of the previous decade. They occurred more quickly

than those following the Indian test which had undergone a near-two year delay as the American Congress tried to rouse enthusiasm for immediate action. It will be argued below that the speed of this response was a logical extension of the belief, firstly, that there was urgency and, secondly, that no other (national) interests existed which were of a higher priority than nuclear nonproliferation and strengthening the regime. Such beliefs are evident not only in the speed of the action taken, but also in the language of the relevant actors.

The United States

The acceptance of danger to the nonproliferation regime followed the Iraqi revelations almost immediately. Agreement existed within the American government that a serious problem existed and required American leadership to rectify it. In addition, Congress had no need in 1991 to persuade the Administration of the need for immediate action. Hearings in Congress spoke of the threat created by Iraq and its potential imitators not as something which hovered in the distant future, but one which was already at hand. The expression of Congressional fears regarding "whether other nations have emulated Iraq"[61] revealed anxiety over the present as well as the future. The concern that other states hostile to the US might be imitating Iraq pervaded the discussions. The belief that the danger revealed by Iraq had not been ended was very different from the assessment which had prevailed ten years earlier, and so too was the consequent sense of whether or not the need for action was pressing or could be delayed. A letter to Congress from the Administration regarding

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[60] "London Economic Summit Declaration on Conventional Arms Transfers and Nuclear, Biological, and Chemical Weapons Proliferation," in *Public Papers of the Presidents of the United States: George Bush, 1991 – Book I,* p.890.

[61] *Proliferation Threats in the 1990's,* p.50 (speaker: Senator Roth).

cooperation with European suppliers expressed the belief that questions of nuclear proliferation be dealt with sooner rather than later – and that

> it is essential that cooperation between the United States and the Community continue and, likewise, that we work closely with our allies to counter the threat of proliferation of nuclear explosives.[62]

It was therefore possible to identify – in the words of one Congressman – "the President's sense of urgency" regarding nuclear proliferation.[63] The incompetence of the DOE, for example, was contrasted with efforts elsewhere, and it was noted that "the DOE mission in preventing the further spread of nuclear weapons should also be one of a great sense of real urgency."[64]

This sense of urgency was underscored by growing evidence of attempts by another NPT signatory – North Korea – to acquire nuclear weapons. In the aftermath of the Indian test explosion, the nuclear deals between West Germany/Brazil and France/Pakistan had done much to foster the sense of time running out and the consequent need for immediate action. Events in North Korea, while not crucial in *creating* a sense of urgency, encouraged the growing perception that there was a limited time for the necessary preventative action to taken. As one DOE official asserted, the dealings with Iraq had made "the United States and other nations more concerned about what North Korea is actually doing and more prone to taking serious steps to stop it from acquiring nuclear weapons."[65]

This sense of urgency which pervaded the US government was accompanied by a belief that no other competing interests should prevent action being taken

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[62] "Letter to Congressional Leaders on Nuclear Cooperation with EURATOM, March 8th 1991," in *Public Papers of the Presidents of the United States: George Bush, Book I,* p.230.

[63] *Nuclear Nonproliferation: Concerning Failed Efforts to Curtail Iraq's Nuclear Weapon Program,* p.2 (speaker: Congressman Dingell, chairman).

[64] Ibid., p.2.

immediately. The elements which had interfered with American action following the bombing of Osiraq – concern over Israel's position in the IAEA and the growing utility of Iraq as a power balancer – were now absent. The Cold War, which in the eyes of the Reagan Administration had taken precedence over the niceties of a nuclear nonproliferation regime, was also at an end. The cooperation over such issues that had characterized US/USSR relations in the case of India had, as the previous chapter demonstrated, moved from an unspoken understanding to a positively helpful partnership.[66] Moreover, the motivation for warmer relations with Iraq had dissipated with the conclusion of the Iran-Iraq War in 1988. The fear of post-revolution Iran as the exporter of further Islamic revolution had declined, and with it any reason to refrain from sending a message to would-be proliferators by protecting Iraq. Action against nuclear proliferation elsewhere in the world was not, on this occasion, superseded by other interests. Immediate movement was thus not only desirable but, with nothing else taking precedence, achievable.

Understanding of immediacy – the IAEA

Once its initial defensiveness had passed, the IAEA also displayed urgency in seeking remedies for the failings revealed by Iraq. The first indication of this was the decision in 1991 to bring the Board of Governors meeting forward from its usual September date to July.[67] The revelations in Iraq raised questions which could not be postponed even by a mere two months.

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[65] Deutsch, "The New Nuclear Threat," p.131.

[66] David Fischer notes, for example, that without the end of the Cold War, it is doubtful "the [UN Security] Council would have been able to agree unanimously on its January 1992 declaration regarding the threat to international peace and security posed by the proliferation of weapons of mass destruction." (Fischer, *History of the IAEA,* p.305.)

[67] The decision to change the meeting dates was reported in *The Financial Times*, 19 July 1991.

It was, furthermore, publicly accepted by the Agency that any changes that had been taking place previous to the shock of Iraq were occurring too slowly. Early in 1992, IAEA safeguards officials referred to the Agency's recognition that the "events of 1991 made it clear that the evolutionary development of safeguards approaches need acceleration."[68] This acceleration duly having occurred over the years to come, the Agency continued to identify its position as having been inspired by a sense of the need for immediate action. "The Iraqi experience," a publication of the safeguards division seven years later stated, "thus highlighted the urgent need for the IAEA to review its current safeguards system."[69] David Fischer, in reviewing the post-Iraq activities of the IAEA, noted that "it is to the credit of the IAEA that this review [of safeguards and procedures] was promptly undertaken and first applied in the case of the DPRK."[70] Again, the genuineness of such sentiments was demonstrated by prompt overhaul of much of the safeguards system immediately following Iraq and concluding with the creation of the Model Addition Protocol.

Understanding of Immediacy – the supplier states

Just prior to the Gulf War, it was remarked of Germany that nuclear nonproliferation had taken a back seat to industry and that, in order for change to occur, "priority in this field must shift from economic to political and strategic concerns."[71] After 1991, and on the heels of the aforementioned domestic scandals, it was observed of Germany that it had "become very interested in an international

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[68] Jennekens, Parsick and von Baeckmann, "Strengthening the International Safeguards System," p.10.

[69] *International Nuclear Verification Series,* p.20.

[70] Fischer, *History of the IAEA,* p.285.

[71] Müller, "After the Scandals: West German Non-Proliferation Policy," p.41.

agreement to reinforce export controls,"[72] a statement which indicates the shift which had taken place. The flurry of activity within the NSG immediately following the Gulf War was not solely at the behest of the United States, but rather a cooperative effort on the part of all the key supplier states. The rapid resurrection of the suppliers' group (in April 1991) reflected not merely the determination to be proactive, but the shared conviction that time was of the essence. In the words of one participant in the reconvened NSG, "the war made the suppliers realize the potential dangers involved *and the urgent need for action to prevent them*" [my italics].[73] Again, with the Cold War at an end, security considerations which had emphasized the threat from the nuclear rivalry between the two superpowers could turn instead to the now more immediate problem of horizontal proliferation, particularly in regions of instability.

Conclusions regarding the understanding of immediacy

Unlike in the cases of both India and Osiraq, the belief that action was urgently required followed almost immediately on the heels of the first revelations. In the United States, this was aided by the same assessment of the shock in both the Administration and Congress. The lack of delay in the American reaction which followed the Gulf War reflects this shared sense of immediacy, which was further unhindered by competing concerns about the Cold War or reaping the possible benefits provided by Iraq as a counterbalance against Iran. In addition, the rapidity of response from the IAEA and the European suppliers indicated a similar assessment of nuclear nonproliferation as requiring immediate attention. Even small delays, such as the gap before the IAEA Board of Governors meeting, were prevented by moving the date forward. The NSG, for its part, was convened as early as April 1991, again

[72] Müller, "The nuclear non-proliferation regime beyond the Gulf War," p.97.

demonstrating the desire for corrective action to be taken sooner rather than later. The restructuring of much of the regime, therefore, both benefited from and reflected the consensus which existed, from the moment the reality of the shock became clear: that the time to enact change to the regime was at hand.

Understanding of Solvability:

The existence of a problem, the assessment of responsibility for it, and the assessment of the urgency of corrective action are necessary antecedents to the kind of regime change which followed from the shock of Iraq. Solutions to these problems – or rather evaluations made regarding available solutions – are equally important to an understanding of the resulting regime change which occurred. The acceptance of the need to solve the problems revealed does not automatically imply an understanding of what those solutions are or, indeed, whether they exist at all. The shock of Iraq did inspire dramatic and, more importantly, deliberate change to the regime. Such purposeful action implies a belief, following the shock, that the problems revealed did indeed have workable solutions within the context of the regime.

The US and the understanding of solvability

Following the Iraqi shock, the general consensus that existed between Congress and the Administration regarding nonproliferation, continued during the search for specific, negotiable solutions. In both, the need to tighten the regime's existing export controls, expand the trigger list and include dual-use technology, and improve IAEA safeguards, met with general agreement. Hearings such as those

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[73] Tadeusz Strulak, "The Nuclear Suppliers Group," p.4.

addressing the problems in the DOE were, in fact, specifically focused on preventing another shock of this nature by tightening American nuclear export standards.[74]

The American identification of the need to target international standards for nuclear exports was, on a basic level, evidenced by its willing participation in the reinvigorated suppliers' group. The submission by the US delegation, in one such meeting, of a paper on dual-use controls further indicates the American conviction that such controls were an integral part of the solution to the problems. The identification of expanded multilateral export controls by the United States was specifically cited in a White House Statement, in which it was claimed that "our experience in the Gulf has reinforced the lesson that the most effective export controls are those imposed multilaterally."[75] A letter to Congress also alluded to the belief that solutions could be found in greater multilateral cooperation between the US and Europe. In it, the President declared that "it is essential that cooperation between the United States and the [European] Community continue and, likewise, that we work closely with our allies to counter the threat of proliferation of nuclear explosives."[76] The implied determination that there were specific, workable solutions to the problems raised by Iraq has been borne out. The shock had not only been understood to have exposed loopholes requiring closure, but was equally (and crucially) interpreted as being amenable to such repair.

Simultaneous American identification of the need, and possibility of support, for improved IAEA safeguards was also evident. The Assistant Secretary of State, for example, met with no opposition when he suggested before the House of

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[74] See the hearing: *Nuclear Nonproliferation (concerning failed efforts...).*

[75] "White House Statement on Weapons of Mass Destruction," in *Public Papers of the Presidents of the United States: George Bush, Book I,* p.223.

[76] "Letter to Congress: Leader on US Cooperation With EURATOM," p.230.

Representatives that "fundamentally, the revelations about Iraq demonstrated the need for the international community to strengthen the Agency's ability and authority to detect undeclared nuclear activities outside declared safeguarded facilities."[77] In addition, as was noted earlier, the need for increased American support for the IAEA (financial and political) was also deemed necessary in Congress. [78]

Once again, the differences between 1991 and 1981 are conspicuous. The post-Osiraq period had seen only criticism of the IAEA from Congress with the sole proposal of a solution – the reconvening of the NSG – rejected by both the State Department and Administration as both untenable and undesirable. This time, as with the assessments of the danger, responsibility and immediacy, there was again broad agreement within the United States over the feasibility of fixing the damage done to the regime by Iraq actions. There was a perceptible sense of confidence, in the US, at having identified realistic solutions.

The IAEA and the understanding of solvability

The Board of Governors' belief that the problems of the shock had – and had to have – solutions was demonstrated almost immediately following the shock itself. "There was no doubt," it was stated, "that a fundamental review and redirection of the existing safeguards system was essential."[79] Although this indicated a primary belief that realisable solutions existed, specific suggestions were not long in coming. The case of Iraq, it was recalled by one member of the Department of Safeguards, "underscored the breadth of information and access needed by the IAEA to

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[77] *Iraq's Nuclear Weapons Capability and IAEA Inspections in Iraq,* p.5 (speaker: Assistant Secretary of State, Robert L. Gallucci).

[78] *Nuclear Proliferation: Learning from the Iraq Experience,* p.39.

[79] Fischer, *History of the IAEA,* p.285.

confidently fulfill its mandate."[80] The emergency Board of Governors meeting in July 1991 was accompanied by the Director-General's proposal of three *specific* responses to the questions raised about the efficacy of safeguards. This ability to quickly and specifically identify solutions (as discussed in the previous chapter: access to the Security Council; access to intelligence; exercising the right to special inspections) is, in itself, indicative of a belief that realistic solutions to the problems not only could be, but *had been* identified. Blix's solutions were echoed in such fora as an IAEA Bulletin article (which noted the IAEA report to the UN Security Council about Iraq's violation and maintained that "it is important that this linkage be confirmed and institutionalised"[81]), and in the testimony of IAEA inspectors before the American Congress, in which was cited a need for "much closer collaboration with individual states," as well as the necessity of "short notice inspection with greater freedom of movement."[82]

However, the Director-General's proposals were followed by the suggestion of the 93+2 Programme – an initiative which was more significant. The decision to embark upon such negotiations indicated an acceptance of the shocks eventual solvability. It should be noted here that the negotiations for the 93+2 Programme were embarked upon two years after the shock of Iraq (in 1993) and were ultimately more protracted than expected, ending only in 1997, with the completed Model Additional Protocol. Nonetheless, such negotiations stand as evidence of a belief in solvability once the need for fundamental change had been accepted. The head of some of the IAEA inspection teams, David Kay, confirmed this belief in the

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[80] Richard Hooper, "Strengthening IAEA Safeguards In an Era of Cooperation," *Arms Control Today,* vol.25, no.9, November 1995, p.15.

[81] Scheinman, "The Nuclear Non-Proliferation Treaty: On the Road to 1995," p.38.

[82] *Nuclear Proliferation: Learning from the Iraq Experience,* p.23 (speaker: Dr. David Kay).

solvability of the shock when he testified before Congress that "it seems to me that the world is prepared, more than ever before, for the major powers, as unfair as this may be, to insist that things stop, and enforce this through sanctions."[83]

The IAEA Board of Governors, as well as at least one leading inspector, apparently came to believe that the shock of Iraq was able to be fixed. In spite of some difficulties in bringing some major states on board – particularly in reference to the Model Additional Protocol – negotiations for safeguards reform continued and concluded with an agreement. The frank admission of the ominous implications of the shock for IAEA credibility was accompanied almost immediately by the citation of, and negotiations for, ways by which to correct the problems – actions which indicate a belief in the existence of specific, negotiable solutions.

Understanding of Solvability and the Suppliers (including, where appropriate, the United States)

The agreement that existed between the United States and those suppliers which were formerly somewhat reticent about tightening export standards constituted a change in nonproliferation relations. Some European states, such as the United Kingdom had usually been willing participants in such negotiations. However, the traditional dance to persuade states such as Germany and France to align themselves with the policy desired by the US had become unnecessary in the face of the universal determination to reconvene and expand the previous supplier guidelines.[84] There was, as a consequence a harmony within the non-American suppliers (most significantly Germany and France) over the possibility of solving the problems that they accepted

[83] Ibid., p.26 (speaker: Dr. David Kay).

[84] As noted in the previous chapter (p. 212), these states had already demonstrated themselves to be amenable to such changes in the year prior to the shock of 1991. Thus, this universal determination

had been created. The willing participation of these two in the NSG indicates the assessment of nuclear export policy not simply as the root of the problem, but one which had solutions which were acceptable.

The simple resurrection of the NSG is, on its own, an unreliable indicator of a belief among non-American supplier countries that the problems in the regime could be solved. Indeed, this was demonstrated in the case of the Indian test, when the US all but dragged the belligerent France and West Germany to the negotiating table. The new fact of *support* for this revival, and the whole-hearted participation in it, does imply a belief that the NSG was the avenue by which corrective action should be taken. The German submission calling for full-scope safeguards as a condition of supply and the creation of guidelines on dual-use items further underscores not only the German desire to be proactive, but also the belief that there were specific solutions which were necessary and that the damage caused by the shock was repairable. .

The existence of such interpretations was perhaps best articulated in joint supplier statements, which included the United States. The conviction that there were and had to be solutions, and that they lay within the context of the nonproliferation regime, was evident in pronouncements such as that which declared that "we are determined to combat this menace by strengthening and expanding the non-proliferation regimes."[85] The confidence that supplier states knew precisely what to do to heal the regime, and the confidence that these solutions were workable and working, was evident a year later. A joint declaration in Munich reiterated the existence of the "New Partnership" and expressed the belief that "nuclear cooperation will in future be conditional on adherence to the NPT or an existing equivalent

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had been coming into alignment before the reconvening of the NSG and the negotiations for the Warsaw Guidelines.

internationally binding agreement as well as on the adoption of full-scope safeguards, as recently laid down by the Nuclear Suppliers' Group."[86] A more important change, however, was the decision to solve the new problems raised by widening the existing trigger list and including dual-use technology under the category of prohibited items for export. These too were accepted as viable solutions.

The corresponding belief, that resolution of the shock would also be dependent on improved IAEA safeguards, was further evidence of the understanding of solvability. In the same statement, it was declared that "we will support reference by the IAEA of unresolved cases of proliferation to the UN Security Council."[87] Once again, the belief in having identified, specific, workable solutions underscored an overall belief that the damage to the regime which (it was agreed) must be repaired, could be repaired.

Conclusions:

The aftermath of the revelations in Iraq following the Gulf War led to perhaps the most drastic change to the nonproliferation regime since its inception just over twenty years earlier. Indeed, the damage done to the regime by Iraq and its potential imitators was such that, in order to maintain any credibility, the regime was obliged to change in response. An investigation into how the shock and its effect on the regime were understood allows some conclusions to be drawn as to why this might have been. It has further revealed both distinct differences from, and notable similarities to, the Osiraq and Indian shocks which will be expanded on in the concluding chapter.

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[85] "London Economic Summit Declaration," in *Public Papers of the Presidents of the United States: George Bush, Book I,* p.893.

[86] "Munich Economic Summit, Political Declaration: Shaping the New Partnership, 7 July 1992," in *Public Papers of the Presidents of the United States: George Bush, (1992-1993) Book I,* p.1087.

Despite the fact that the Iraqi attempt to construct a nuclear weapon remained incomplete, the accusations that an non-nuclear NPT signatory had been seeking a nuclear capability were proven for the first time. The awareness of this undetected act of deception sent shock waves through the regime, and these were shared in equal measure between those actors most directly affected by it: the United States, the IAEA, and the main suppliers of Iraq.

There developed a conviction that Iraq's actions were not only dangerous in and of themselves, but were indicative of wider problems in the regime. Questions were raised regarding the ambitions of other states, both in and outside the formal nonproliferation regime. The fact that Iraq was an NPT signatory which had only recently been declared to be in good standing seriously damaged the credibility of the regime itself, particularly the prestige of the NPT and the perceived effectiveness of the IAEA. The question of responsibility for leading the necessary changes were answered resoundingly among all those directly involved. Once again, the United States Congress and Administration found themselves in broad agreement on American miscalculation and liability – this time without the need for a campaign on the part of Congress. The result was a consensus on the need for the US to lead the necessary changes to the nonproliferation regime. The IAEA, after the triumph of the reformers over the traditionalists, admitted the existence of flaws and limitations in its safeguards and procedures which had helped Iraq in its quest. The P-5 powers of the UN Security Council, as well as suppliers such as Germany (and France), were likewise shown to have accepted liability in their previous standards of nuclear trade and evidenced a desire to be proactive in bringing about change.

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[87] Ibid., p.1087.

It is further clear that, following the shock, nuclear proliferation and the condition of the nonproliferation regime, were able to move to the top of the American agenda, as well as that of the other states. The events in North Korea did not so much generate this interpretation (as had the West German and French nuclear deals following the Indian shock) as reinforce it. The belief that the problems revealed required immediate correction was assisted by the evaluation that, on this occasion, there were no other competing interests which needed to be addressed first. The danger posed was such that the commercial interests which had caused hesitancy, particularly in Germany and France, were now seen as secondary to nonproliferation and bolstering the regime. Moreover, the end of the Cold War had removed another important distraction which had previously hindered the assessment of the urgency required. Finally, the American need for Iraq as a counterweight to Iran had ended.

A widely-held belief in the essential solvability of the problems revealed by the shock allowed the final barrier to be lowered and the successful negotiations for regime change to take place. The IAEA's vague murmurings in 1981 about constantly strengthening safeguards had given way to the Director-General's three points and the 93+2 Programme. The enthusiasm for the reconvening of the NSG, as well as the all-important creation of guidelines on dual-use items was further evidence of the interpretation of the shock as having specific, workable solutions – a sentiment which was perhaps best reflected in the joint statements of the suppliers involved.

The regime change which followed the Iraqi shock thus demonstrates the a specific understanding of danger, responsibility, immediacy and solvability. Moreover, it is clear that not only were the necessary assessments made and consolidated within the United States, but in other suppliers and the IAEA as well. The speed at which change to the regime took place, and indeed the extent of such

change is the result of such consensus. This is in contrast to the significant, but less extensive elaboration that resulted in the 1970's when the United States was obliged to initiate such change in the face of reluctant participation on the part of some suppliers. The timing of the Iraqi revelations were such that rapid and significant regime change was required in order to maintain credibility in the face of the upcoming 1995 Extension Conference. It has therefore been possible to draw conclusions regarding those interpretations of the shock which underscored the "genuine" regime change which so clearly resulted.

Chapter 8 – The 1998 Nuclear Tests by India and Pakistan

The investigation of the nuclear nonproliferation regime from its birth until 1997 – the examination, specifically, of shocks to the regime – has yielded some valuable results. The indefinite extension of the NPT in 1995 meant that, nominally at least, the 'shelf-life' of the nuclear nonproliferation regime was indefinitely extended. Consequently, it is incumbent upon an investigation of this sort not simply to end abruptly but to evaluate recent events in light of the conclusions drawn from the previous three case studies.

Prominent among the events alluded to above are the series of Indian and Pakistani nuclear tests in 1998. Coming three years after the extension of the NPT which had capped extensive change to the nonproliferation regime, the tests occurred in circumstances which were, in some ways, similar to those in 1974, when India first tested. Sentiments surrounding nuclear nonproliferation and the related regime were again a curious blend of complacency and foreboding. The sense of satisfaction, that key problems had been fixed and that, as Time magazine put it, "the age of nuclear terror seemed over"[1], was at the same time accompanied by a growing disillusionment with the optimistic prospects for the harmony of the "new world order" which had been prophesied following the collapse of the USSR and the end of the Gulf War.

Given that it has been only four years since this latest shock to the regime, it is clearly not yet possible successfully to declare the 'outcome' of the tests or their ultimate effect on the regime. As a result, whereas the previous three case studies have been split into two chapters each, the shock of 1998 will be amalgamated into one. Nonetheless, this latest shock to the regime requires some exploration. The

Indian shock of 1974 was an instance of a shock in which regime change followed a delayed reaction. The bombing of Osiraq, on the other hand, was an example of a shock in which such delay never gave way to regime change. Finally, the 1991 Iraqi revelations in which little delay existed before regime change was undertaken. The 1998 South Asian nuclear tests appear to be developing into an example of a different type of shock again: one in which an immediate reaction was followed by no regime change.

Thus, it is both possible and important to examine this latest shock to the nonproliferation regime in the light of the conclusions drawn from the investigation of the three previous cases. In spite of its relative recency, enough time has passed since the South Asian tests that their apparent effect on the regime may be discussed. The next few years will eventually reveal whether or not the conclusions drawn regarding the shocks of 1974, 1981 and 1991 have also provided useful insight for this most recent shock.

The Regime and Nuclear Context Prior to the Shock:

It was declared, in the most comprehensive study of the Indian nuclear programme, that the tests which took place in Rajasthan on May 11th and 13th 1998 "shocked the world."[2] This assessment was echoed elsewhere, with observations that the series of tests by the two states had "caught the world by surprise"[3] and meant that the regime had, as a consequence, "received a jolt."[4] This sense of the tests as a shock

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[1] Johanna McGeary, "Nukes...They're Back," in *Time*, May 25th, 1998, p.28.

[2] Perkovich, *India's Nuclear Bomb*, p.404.

[3] David Albright, "The Shots Heard 'Round the World," *Bulletin of the Atomic Scientists*, vol.54, no.4, July/August 1998, p.21.

[4] T.V. Paul, "The Systemic Bases of India's Challenge to the Global Nuclear Order," *The Non-Proliferation Review*, vol. 6, no.1, Fall 1998, p.1.

to the regime prevailed despite the fact that the Indian and Pakistani nuclear weapons programmes were among possibly the worst kept secrets in the arms control world. India had demonstrated its nuclear capability with its 'peaceful' nuclear explosion twenty-four years earlier and Pakistan's ambitions had been publicly acknowledged, for instance in President Bush's October 1990 letter to Congress in which he asserted that he could no longer guarantee that Pakistan did not have nuclear weapons.

India's nuclear program had been reined in following the 1974 test. The strengthening of the regime's trade controls with the establishment of the NSG – as well as the termination of nuclear cooperation between India and Canada – had hindered the further development of the Indian nuclear programme. Nonetheless, the return of Indira Gandhi to power in 1980 reinvigorated the desire to build up Indian nuclear capability. The growing discomfort with Pakistan's nuclear capabilities provided further impetus towards the extension and sophistication of the nuclear option. Incidents such as the 'Brasstacks' exercise (in which military exercises conducted by both India and Pakistan were interpreted by each side as genuine military preparations[5]) underscored the tension that continued to exist between the two states, despite the ostensible 'peace' which had held since 1971. The dispute over Kashmir flared again in 1990 and throughout the 1990's calls grew within India for the nuclear option to be declared. In 1995 (under a Congress government) and in 1996 (under the auspices of the Bharatiya Janata Party), reports circulated that preparations for a test had been detected by American intelligence and that the determination to test had been extinguished by American pressure.[6] The re-election

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[5] For a fuller account of the fallout of the Brasstacks exercise, see Perkovich, *India's Nuclear Bomb*, pp.277-282. Also see Devin Hagerty's *The Consequences of Nuclear Proliferation: Lessons from South Asia,* (Cambridge, Mass.: The MIT Press; 1998), chapter 4.

[6] Following the successful tests in May 1998, it was reported in Nucleonics Week that "US intelligence has indicated that since 1996 India was likely prepared to carry out a nuclear weapons test at Pokaran

of the Bharatiya Janata Party (BJP) in 1998 led very shortly to preparations to test which, this time, went undetected by American intelligence and were successfully carried out, in spite of the apparent thaw in relations between India and Pakistan as well as between India and China.

The fact of a Pakistani nuclear capability was equally well-known and had been ever since Zulifikar Ali Bhutto's 1966 announcement that Pakistan would match any Indian nuclear capability "even if Pakistanis have to eat grass."[7] Its momentum was dissipated by France's decision, taken under pressure from the United States following the Indian test, to pull out of its agreement to supply a reprocessing plant to Pakistan. The termination by the Canadian government of a deal for spare parts and fresh fuel for the KANUUP reactor was a further setback. Nonetheless, Pakistan's determination to be India's nuclear equal meant that its nuclear programme began in earnest after the 1974 Indian test.[8] The breakdown of nuclear cooperation with France meant simply that Pakistan revived and expanded its reliance on non-indigenous equipment and technology.[9] Much as in Iraq's proliferation efforts, several countries supplied Pakistan with materiel. The Swiss government was identified by the US as having "knowingly permitt[ed] exports of sophisticated

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(sic) in the Rajasthan desert." (see Mark Hibbs, "India was Ready to Test A-bombs on a 'few days notice'." *Nucleonics Week*, vol.39, no.20, 14 May 1998, p.1.)

[7] Quoted in Samina Ahmed, "Pakistan's Nuclear Weapons Program: Turning Points and Choices," in International Security, vol, 23, no.4, Spring 1999, p.183. Again, for a fuller account of the history of Pakistan's nuclear program, see this article or Samina Ahmed and David Cortright (eds.), *Pakistan and the Bomb: Public Opinion and Nuclear Options,* (Norte Dame, Ind., University of Notre Dame Press; 1998).

[8] In the mid to late 1970's, a Pakistani working at the Dutch Almelo centrifuge enrichment plant (Dr. Khan) obtained enrichment technology, and the Pakistani nuclear programme also acquired components for gas centrifuges and computer technology in Switzerland and Holland.

[9] It has been generally accepted, for example, that "Pakistan developed its capacity sometime in the early-or mid-'80's" (in Praful Bidwai and Achin Vanaik, *New Nukes: India, Pakistan and Global Nuclear Disarmament,* (Oxford: Signal Books; 2000), p.73.

nuclear technology to Pakistan."[10] Pakistan obtained the facility for converting yellowcake to uranium hexflouride (the feedstock for enrichment) from a German firm – CES Kalthof GmbH of Freiburg .[11] China was the key assistant in Pakistan's quest for nuclear weapons, much to the distress of India. In testimony before a 1997 Senate Committee, for example, Deputy Assistant Secretary of State for non-proliferation, Robert J. Einhorn affirmed that

> in the nuclear area, we have long had concerns about China's assistance to Pakistan's efforts to produce unsafeguarded fissile materials and to Pakistan's program to develop nuclear explosives. These concerns were especially acute in the 1980's but have continued even after China acceded to the NPT in 1992.[12]

Pakistan's unceasing quest for nuclear weapons could not be thwarted indefinitely. By the end of 1990 Pakistan's nuclear ambitions had succeeded to the point that President Bush informed Congress of his inability to confirm that Pakistan did not have nuclear weapons. Consequently, and as the American Deputy Secretary of State observed, "even before May 11 1998, no one doubted that India had a nuclear-weapons capacity, just as Pakistan's nuclear-weapons capability was universally recognized before May 28."[13]

It was thus said of the Indian and Pakistani tests that they ran counter a spirit of progress and optimism that was otherwise reigning in the sphere of nonproliferation efforts – that the actions of these two states were "bucking that trend

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[10] Spector, *Nuclear Proliferation Today*, p.89.

[11] Ibid., p.90.

[12] Statement of Robert J. Einhorn before the Subcommittee on International Security, Proliferation, and Federal Services, of the US Senate Committee on Governmental Affairs, April 10, 1997, quoted in Mohammed Ayoob, "India's Nuclear Decision: Implications for Indian-U.S. Relations," in Raju G.C. Thomas and Amit Gupta, *India's Nuclear Security,* (Boulder, Colorado: Lynne Rienner Publishers, Inc.; 2000), p.143 (fn.10).

[13] Strobe Talbott, "Dealing with the Bomb in South Asia," *Foreign Affairs*, vol.78, no.2, March/April 1999, p.117. Talbott served as President Clinton's envoy in the ensuing talks with India and Pakistan.

and putting it into jeopardy."[14] The days of wine and roses which had followed the end of the Cold War and the defeat of Iraq – during which nuclear nonproliferation was a high international priority and disarmament seemed for once, within the realm of possibility – were already giving way to a growing cynicism. Indeed, with the ink barely dry on the agreement to extend the NPT indefinitely, the optimism which had pervaded the four years following the Iraqi revelations was already fading into apathy and disillusionment, in a manner similar to that blend of complacency and apprehension which provided the backdrop of the first Indian test in 1974. Problems were arising which put paid to the notion of the new world order. As one observer remarked, "the global nonproliferation regime was in trouble before the South Asian nuclear tests. The tests themselves were merely a symptom of this condition, not the cause."[15]

The unity which had reigned among the P-5 states of the UN Security Council – in particular, the accord between the US and Russia – had been gradually unravelling for the past three years. The period of cooperation which had peaked with the extension of the NPT was, by the time of the Indian and Pakistani tests, already revealing itself to be an interruption in the usual discord rather than a genuinely new beginning. Instead, the United States, Russia and China found themselves increasingly at loggerheads on a range of issues, bringing to a halt the accord which had allowed negotiations on nuclear nonproliferation and disarmament not only to take place but to progress and be implemented. The differing views on what courses

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[14] Transcript of *US Diplomacy in South Asia: A Progress Report*, by Strobe Talbott, Deputy Secretary of State, at the Brookings Institution, November 12th, 1998. (www.brook.edu/comm/transcripts/19981112a.htm)

[15] Wade Huntley, "Nonproliferation Prospects after the South Asian Tests," *The Nonproliferation Review*, vol.6, no.3, Fall 1998, p.91. Even in achieving the indefinite extension of the NPT, problems were visible. The success in achieving this extension was by no means a cakewalk but rather (as detailed in Chapter 6) was the result of compromise and discussion on the nuclear status of Israel and

of action to pursue with respect to Bosnia and Iraq, for example, did little to bring the US and Russia together diplomatically. The application (later accepted) from Poland, Hungary and the Czech Republic to join NATO did further damage to their relations, particularly in light of the conditions attached to the US ratification of the NATO expansion. These conditions included the proviso that no limitations be placed on numbers of NATO troops or types, and the rejection of Russian efforts to establish an NWFZ in Central Europe.

These appearances of divisions between the United States and Russia over the future of arms control occurred, as one commentator observed, "at the precise moment when more nationalist and more anti-Western feelings are being awakened in Russia."[16] The three years following the extension of the NPT had seen a narrowing of interests in the United States as well. Rather than the multilateralism which had underscored many of the changes to the nonproliferation regime in the early years of the decade, the lack of progress in the years 1995 to 1998 also reflected "that a decisive shift had occurred in the US towards unilateralism, against arms control and against any technological restraint."[17] The ratification of the 1993 START II Treaty, both in the United States and in Russia, remained elusive. It was noted by the UN Undersecretary-General for Disarmament Affairs Jayantha Dhanapala, in the year following the India and Pakistani tests, that "it is no secret that the bilateral nuclear talks between Russia and the United States have made no progress since 1995."[18]

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the necessity of NWS beginning the negotiations in good faith towards fulfilling their disarmament obligations under Article VI of the NPT.

[16] Hugh Beach, "The Expansion of NATO," in Frank Blackaby and Tom Milne (eds.), *A Nuclear-Weapons-Free World,* (London: MacMillan Press Ltd.; 2000), p.178.

[17] William Walker, "Nuclear order and disorder," *International Affairs,* vol.76, no.4, October 2000, p.713.

[18] "Illuminating Global Interests: The UN and Arms Control – An Interview with UN Undersecretary-General Jayantha Dhanapala," *Arms Control Today,* vol.29, no.6, September/October 1999, p.4.

Again, this stagnation which followed the tumultuous changes which had occurred between 1991 and 1997 coincided with an increasing American disenchantment with multilateralism and scepticism regarding the utility of international treaties (those connected to nuclear nonproliferation included). This disenchantment, ironically, had its immediate antecedents in the very event which led to so much regime change: the 1991 revelations about Iraq. It was more acidly perceived by one commentator as being "symptomatic of a senate which esteems only American interests narrowly defined [and] despises any international body (OSCE, UN, IMF) that America cannot dominate."[19] While the impatience underlying such an observation is apparent, the declining American interest in international institutions, post-1995 and pre-May 1998, is equally evident.

This was particularly true in Congress, where there was open hostility to the Comprehensive Test Ban Treaty (CTBT), which had been sent to the Senate for ratification in September of 1997. Significantly, the head of the Foreign Relations Committee, Senator Jesse Helms, "repeatedly stated that the CTBT was a low-priority item and that it would only receive consideration after the committee had voted on two unrelated sets of agreements not yet submitted by the administration."[20]

Finally, it is significant to note that the Conference on Disarmament (CD), the international body charged with negotiating most multilateral security treaties, had likewise stagnated in the three years prior to the Indian test of 1998. It was pointed out by Dhanapala, for example, that "for two of those years members have not even been able to agree on a working program."[21] Again this was credited to the

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[19] Beach "The Expansion of NATO," p.178.

[20] Craig Cerniello, "Senate Rejects Comprehensive Test Ban Treaty; Clinton Vows to Continue Moratorium," *Arms Control Today*, vol.29, no.6, September/October 1999, p.26.

waning of interest in arms control in the face of renewed international tensions, as the Undersecretary-General stated: "I believe it is a symptom of the international situation [and] the deep disagreements among the great powers."[22]

The international context in which the South Asian nuclear tests took place, then, was one in which nuclear nonproliferation, and arms control more generally, had become unsettled by growing international disharmony. Moreover, American leadership in this arena had given way, domestically, to a cynicism – even antagonism – towards international institutions and agreements.

In addition, India's 1996 preparations for a nuclear test had already indicated that the self-imposed twenty-four year moratorium on testing was, in all likelihood, drawing to a close, expecially on the heels of the election of the vocally pro-nuclear BJP to government. The April 1998 missile tests, first by Pakistan with its "Ghauri" missile, and then by India with "Agni-2", provided further evidence that the future of nuclear nonproliferation was less bright than it had seemed in the halcyon days of the early-to-mid 1990's.

The Shock and Initial International Reactions:

On the eleventh and thirteenth of May, India's period of restraint came to an abrupt end, and put paid to the idea that "since nuclear arsenals were seen as inseparable from East-West hostility, the end of the East-West confrontation [would] sign their death warrant."[23] Once again, the tests met with overwhelming support in

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[21] "Illuminating Global Interests: An Interview with UN Unsecretary-General Jayantha Dhanapala," p.3.

[22] Ibid., p.4.

[23] "Thérèse Delpech, "Nuclear Weapons and the 'New World Order': Early Warning from Asia?" *Survival,* vol.40, no.4, p.58.

India[24] and Prime Minister Vajpayee proudly proclaimed that "India is now a nuclear weapons state."[25] Fifteen days later, Pakistan commenced its own series of tests. These were held on the 28th and 30th of May and, taking the idea of one-upmanship literally, totalled six to India's five.[26]

The reaction, first to the Indian tests and then to the tests by both countries as a whole was mixed. This reflected, as will be argued later, less indifference than a kind of fatalism about what had occurred and what the future held. Indeed, it has been proposed that, following the initial Indian tests, "the absence of a concerted international response tilted the internal balance in Pakistan in favor of a retaliatory test."[27] This is not to say that either India or Pakistan were applauded for their actions. The Chinese government expressed, in its own words, a "strong condemnation" of India's actions.[28] The United Nations Security Council, in one of its increasingly rare moments of unity, passed Resolution 1182 which condemned the tests by both countries. However, the reactions over the following three years

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[24]It was noted in the *Bulletin of the Atomic Scientists*, for example, that "in India, support appeared universal". (see Kalpana Sharma, "The Hindu Bomb," *Bulletin of the Atomic Scientists*, vol.54, no.4, July/August 1998, p.21).

[25] Interview with Prime Minister Vajpayee in India Today, 25 May 1998 (www.india-today.com/itoday/25051998/vajint.html). Such a statement was echoed two days later in the Indian House of Commons, in a paper which likewise declared that "India is a nuclear weapons state. This is a reality that cannot be denied." (see Paper laid on the table of the House: *Evolution of India's Nuclear Policy,* 27 May 1998.)

[26] It is said, however, that Pakistan conducted six tests to equal India's five in 1998 and the one in 1974.

[27] Ahmed, "Pakistan's Nuclear Weapons Program," p.195. This sentiment was echoed elsewhere, when it was suggested that "although India's five nuclear tests...were widely criticized, they met with rather tepid reactions from the world's leading powers that were certainly insufficient to stave off Pakistan's subsequent 'retaliatory' nuclear tests." (See Huntley, "Nonproliferation prospects after the South Asian tests," p.85.) While such an indifferent response may have provided slightly more incentive to test, it nonetheless seems reasonable to suppose that given the history between the two countries, nuclear tests by India – accompanied as they were by declarations of nuclear-weapons-state status – would have been followed by Pakistani tests even in the face of strident and universal international condemnation.

[28] "Statement of the Ministry of Foreign Affairs on India's Nuclear Tests," *News Bulletin,* (No.NB9809), issued 14/05/98 by the Chinese Embassy in the United Kingdom. An article in *The*

indicate that the reforming zeal, and the optimism that such problems could be solved within the context of the regime, had ebbed away.

This was evident in the reactions of countries such as Russia, France and, perhaps surprisingly, the United Kingdom, all of which questioned the efficacy of, and even the justification for, sanctions. An article about the tests, which appeared two months later, was titled "From Russia, a muted reaction".[29] The public reaction of President Yeltsin, moreover, was to observe that "India is frankly a close friend of ours and we enjoy very good relations...when my visit to India takes places next year, I will do my utmost to somehow settle the problem."[30]

This refusal to damn India and Pakistan partly reflected a reluctance to apply sanctions. Problematically, the application of sanctions would inevitably cause more harm to Pakistan than India. It was observed by one commentator that "Prime Minister Nawaz's apparent reluctance to test reinforced the perception on the part of some Western observers in the wake of the tests that Pakistan was less blameworthy."[31] Even before Pakistan had carried out its expected retaliatory tests, "European nations, led by Britain, made clear to the US they would not agree to a

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Beijing Review shortly after the tests echoed this perception (see Guangyao, Hu and Xiaoming, Hu, "Nuclear Tests Threaten Stability" *The Beijing Review*, June 1-7, 1998, p.7).

[29] Igor Khripunov and Anupam Srivastava, "From Russia, a muted reaction," *Bulletin of the Atomic Scientists*, vol.54, no.4, July/August 1998, p.42. While conceding that "Russian criticism of India has been muted", the authors claim, however, that "it would be false to conclude that Russia is only marginally interested in promoting nuclear nonproliferation" (p.42).

[30] Quoted in article by McGeary, "Nukes...They're Back," p.31.

[31] Eric Arnett, "Nuclear Tests by India and Pakistan," in *SIPRI Yearbook 1999: Armaments, Disarmament, and International Security* (Oxford: Oxford University Press; 1999), p.374. In a similar vein, one American Senator stated that "one of the reaasons that I am more concerned in the case of Pakistan about the impact of economic sanctions is I do not want Pakistan to increasingly have to turn to the Irans of the world to remain solvent." (See *Crisis in South Asia: India's Nuclear Tests; Pakistan's Nuclear Tests; India and Pakistan: What Next?* Hearings before the Subcommittee on Near Eastern and South Asian of the Committee on Foreign Relations, United States Senate, One Hundred and fifth Congress, second session, May 13, June 3, July 13, 1998, p.89.)

coordinated policy of applying tough sanctions on India."[32] This new European attitude to these latest acts of nuclear proliferation did not, however, necessarily indicate a disinterest in nonproliferation issues, only a departure from the previous consensus that the application of such sanctions was the best way in which to deal with a proliferator.[33] Another article hinted at the eventual outcome of the tests when it was reported that "Europe is expected to dodge the sanctions and intensify trade with the subcontinent once the fuss dies down."[34] Indeed, Indian Prime Minister Vajpayee noted in an interview that "already, countries like Russia, England and France have shown a commendable sense of realism in their response."[35] In contrast to the reversion to ambivalence by the French, Germany nevertheless expressed strong objections to the tests. The Chancellor, Helmut Kohl, stated of the Indian tests that "this was the wrong decision for them to take. We do not accept that decision."[36] The Foreign Minister, Klaus Kinkel, proclaimed that "the German government condemns today's nuclear tests in India. They mean a setback for the international efforts for international disarmament and nonproliferation."[37] Moreover, and distinguishing itself still further from the French reaction, the German government swiftly cancelled $400 million worth of aid to India.[38]

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[32] "US Not Keen to Find Carrots to Reward India & Pakistan," *Nucleonics Week*, vol.39, no.23, 4 June 1998, p.11.

[33] With its telegram of congratulations to the Indian government, France nonetheless appears to have reverted, at least somewhat, to its former disinterest in multilateral solutions to prevent proliferation and deal with proliferators.

[34] Tim McGirk, "Nuclear Madness," in *Time*, 8 June 1998, p.26.

[35] Interview with Prime Minister Vajpayee in India Today, 25 May 1998 (www.india-today.com/itoday/25051998/vajint.html).

[36] www.cnn.com/WORLD/asiapcf/9805/13/india.us/htm.

[37] McGeary, "Nukes...They're Back," p.30.

[38] Sweden, too, withdrew $119 million in assistance to India, while Japan suspended $1 billion.

The otherwise rather resigned attitude to these new developments was by no means universal. Both in word and in deed, the United States Administration was immediately and strongly critical of the tests. In contrast to previous shocks, however, the aftermath of the 1998 tests found the Clinton Administration attempting to convince Congress – and to some extent itself – of the need for sanctions against India and Pakistan and for further action to be taken in the context of the nonproliferation regime generally. Congress, moreover, appears this time to have been as important in thwarting regime change as it previously had been in motivating it.

Speaking immediately after the Indian tests, President Clinton stated his basic belief that "they were unjustified."[39] As in 1974, India (and Pakistan) had not broken any international laws by proliferating. Nonetheless, in accordance with the Nuclear Proliferation Prevention Act of 1994, sanctions on both India and Pakistan were automatically put into place, involving a cutoff of economic and military aid totalling $140 million. Despite this action, however, American enthusiasm for reinvigorating a multilateral nuclear nonproliferation drive was minimal, particularly in Congress. Rather, the bulk of concern focused less on the tests themselves than on the failure of American intelligence to predict them. An investigation into this apparent intelligence failure was ordered by CIA Director George Tenet.

The necessity and utility of sanctions, however, was vigorously debated in Congress, and was even expressed by several key members of the Administration, including Secretary of State Madelaine Albright.[40] Given this lack of unity within the

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[39]See www.cnn.com.WORLD.asiapcf/9805/13/india.us/htm

[40] *India-Pakistan Nuclear Proliferation*, Hearing before the Subcommittee on Asia and the Pacific of the Committee on International Relations, House of Representatives, One Hundred and Fifth Congress, second session, 18 June, 1998. This importance of this debate in the possible outcome of the shock in the context of the regime will expanded upon later.

United States it is perhaps not surprising that by Autumn of 1998, the decision had been made to ease the sanction applied in order to allow for "greater flexibility in export controls."[41] Instead, American policy on India and Pakistan moved away from the initial punishment and towards an attempt, albeit short-lived, to integrate these new nuclear states into some aspects of the regime, although not the NPT. Rather than force a withdrawal of India and Pakistan's claims to nuclear weapon status, "American policy subsequently focused on more modest and specific objectives: notably securing India's adhesion to the CTBT...and the participation of both countries in the Fissile Material Cutoff Treaty (FMCT) negotiations."[42] At their most productive, these negotiations "produced a committment by Pakistan to sign the CTBT by the end of 1999...and indications from India that it too might be willing to sign under certain conditions."[43]

The CTBT, however, was to prove a sticking point not simply in terms of Indian and Pakistani membership, but in terms of American ratification as well. Ratification of the treaty ran into trouble in the Senate, which was continuing its pre-1998 retreat into unilateralism. On October 13th, 1999, the CTBT was rejected in a Senate vote (51-48), and with it went the overtures to India and Pakistan to make the same commitment.[44] Being, as it was, "largely partyline"[45] the vote against the CTBT's ratification betrayed the cynicism towards arms control – what one

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[41] Shannon Kile, "Nuclear arms control and non-proliferation," in *SIPRI Yearbook 1999: Armaments, Disarmaments and International Security*, (Oxford: Oxford University Press; 1999), p.523.

[42] Giles Andréani, "The Disarray of US Non-Proliferation Policy," *Survival,* vol.41, no.4, Winter 1999-2000, p.53.

[43] Mutimer, "Testing Times," p.15.

[44] The treaty could not come into force without American ratification, thereby lifting any pressure on India and Pakistan to join it.

newspaper referred to as "a new skepticism on arms control"[46] – which was taking hold.

This decisive rejection of the CTBT – a treaty which had, ironically, first been proposed by Indian Prime Minister Nehru in 1954 (and heartily advocated by several US Administrations) – upset whatever momentum remained in the Administration's nonproliferation policies. In spite of President Clinton's professed determination to keep pushing for the implementation of the CTBT, the inward trend continued. As one author pointed out, the rejection of the treaty meant, in effect, that "the United States and India [and Pakistan] now appear to be in almost identical positions vis-à-vis the CTBT."[47] The rise and rise of National Missile Defence (NMD) in the security psyche, moreover, occupied a far greater part of the strategic focus, while multilateral arms control efforts – including the nuclear nonproliferation regime – continued to move farther down the list of priorities. As a consequence,

> American policymakers [moved] down a road towards the downgrading of arms control and upgrading of political military coercion, to a focusing on the mainly politico-military practice of 'counter-proliferation' rather than the politico-legal practice of 'non-proliferation'.[48]

The Outcome of the Shock and Conclusions:

This brief discussion of the outcome of the relatively recent Indian and Pakistani nuclear tests inevitably simplifies the events which followed from them. It has become clear, however, that the optimism and the determination to correct

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[45] Cerniello, "Senate Rejects Comprehensive Test Ban Treaty; Clinton Vows to Continue Moratorium," p.26. All of those voting against the CTBT were Republican. Four Republicans crossed over to vote for the CTBT with Democratic Senators.

[46] *The Washington Times,* 18 October 1999.

[47] Mohammed Ayoob, "India's Nuclear Decision," in Raju G.C. Thomas and Amit Gupta, *India's Nuclear Security*, p.138.

perceived problems in the nonproliferation regime by changing the regime itself had faded. Following the tests of May 1998, the Clinton Administration found itself arguing for multilateral solutions both internationally and with its own Congress. The failure of the CTBT and the growing support for NMD within the US Senate demonstrated that the Administration had lost this argument.

The unsuccessful American efforts to bring India and Pakistan into the CTBT stood as the final attempt to incorporate these two states into the nonproliferation regime, albeit without bringing them into the NPT. In the few years which have followed, action to alter or expand the regime have been all but non-existent. Certainly, regime change on the scale which followed the shocks of 1974 and 1991 has been unforthcoming as, too, has the reconvergence of international and (in the US) domestic expectations which so clearly diverged in the wake of the tests. No alteration or elaboration of the regime's rules, decision-making procedures and institutions has taken place, let alone the kind of change to the norms and principles which would constitute genuine regime change. More than four years after the series of tests, there remains no hint that any change – even as little as the addition of a few rules or procedures – is likely to occur. It is now possible to examine the interpretations of events that underline the absence of regime change thus far and that, in light of the conclusions drawn about the previous three cases, may provide a basis for speculation as to whether such inaction is likely to continue.

Understandings of the Indian and Pakistani tests:

Even the brief narrative that has been offered has revealed that the 1998 nuclear tests exposed the fading consensus on the value of further development of the

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[48] Walker, "Nuclear order and disorder," p.716.

nuclear nonproliferation regime. The unity between Russia, the European suppliers, and the United States – which had followed the Gulf War and been so instrumental in bringing about change to the regime – had fragmented. Even within the United States, Congressional support for multilateral nonproliferation initiatives, which had proven so important in the past, had given way to a suspicion of the utility of regimes and treaties in general. The rejection of the CTBT stood as the most conspicuous evidence of this trend and it was after this point that unilateral attempts by the American administration to persuade India and Pakistan to join the regime (in the context of the CTBT, at least) essentially ended.

Understanding of Danger:

As the previous three case studies indicated, eventual change to the nonproliferation regime was linked to a belief that the shock, by itself and as a precedent was profoundly damaging to, and threatened the credibility of, the regime. Following the Indian test of 1974, this consensus began in Congress which, in turn, persuaded both the Ford and Carter Administrations of the danger who, in turn, persuaded the international community either to agree to, or not to obstruct, the desired changes. In the case of the Osiraq bombing, while the shock was viewed as having set a dangerous precedent and damaged the credibility of the regime, it was considered to have done so groundlessly. The danger of the (ambiguous) shock was instead viewed in a much more regional context – as symptomatic of deepening troubles in the Middle East – rather than in the context of the regime generally. Finally, the case of Iraq in 1991 saw a return to a consensus about a serious danger, current and potential, to the regime.

Following the Indian and Pakistani tests, however, the understanding of the danger was mixed. Internationally, as has already been shown, sharp divisions existed between Russia, the European countries, and the United States. However, the unwillingness of Europe, Russia and much of the American Congress to apply sanctions to India and Pakistan – in contrast to the United States government – was (with the exception of France) less a reflection of concern regarding the regime's credibility than a consequence of differing assessments of the gains to be made or losses to be incurred. Neither India nor Pakistan were seen as being amenable to sanctions, nor is there a great deal of evidence that sanctions were considered a successful means by which to deter possible imitators.

It has been claimed that the tests "created a new sense of unease about what might lie ahead in the Middle East and North-East Asia, two regions of proliferation concern."[49] Attempts to universalise their application were rejected with France, in particular, working "to moderate the response of the Security Council."[50] The refusal to apply sanctions was not replaced by any alternative designed to deter further nuclear development by India, Pakistan or other potential mimics. It was becoming clear that, as one observer remarked "the five permanent members of the UN Security Council are not united in their perception of the threats posed by nuclear proliferation and the best measures in response."[51] The unwillingness of other states to apply sanctions does not, however, demonstrate a lack of concern with the problems which India and Pakistan had undoubtedly raised.

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[49] Arnett, "Nuclear Tests by India and Pakistan," p.521.

[50] Mutimer, "Testing Times," p.17.

[51] Ramesh Thakur "Envisioning Nuclear Futures," *Security Dialogue,* vol.31, no.1, March 2000, p.36. Thakur was speaking of such disunity as having been demonstrated by "the difficulties in Iraq in 1998-99" – nonetheless, the existence of such differences between the P-5 is in evidence at this time.

The eagerness of the Clinton Administration to apply sanctions was evidently not shared in Congress, which remained generally unpersuaded that the tests had compromised the health of the nonproliferation regime. While a few were of the opinion that "India's lack of restraint is a signal to the rogues of this world that they, too, can flout international opinion and international norms,"[52] such sentiments were decidedly in the minority. More common was the belief that concerns about the damage inflicted by the Indian and Pakistani nuclear weapons had been wildly overstated in the past and were in danger of being overstated again. "Despite its grave miscalculation this week," one Senator observed, "India is not rogue state. It is not a Libya, a North Korea, or an Iraq."[53] The Pentagon concurred in a statement on the tests, expressing doubt about sanctions on the grounds that "these are not rogue states."[54]

Broadly speaking then, the concerns which arose from the tests tended to be regional, with the conclusion being drawn, that the direct danger posed to the United States by a nuclear armed-India and Pakistan was minimal. Little mention was made outside the Administration of the tests as a setting a dangerous precedent which could adversely affect the nonproliferation regime. Significantly, though, such a possibility was referred to by both the Director of the CIA (R. James Woolsey) and President Clinton. Woolsey, while suggesting that "Iraq and North Korea are likely to do whatever they are going to do anyway and are not likely to be affected this," nonetheless expressed concern that "over the long run Iran, however, may learn some

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[52] Senator Brownback, speaking in *Crisis in South Asia: India's Nuclear Tests; Pakistan's Nuclear Tests; India and Pakistan: What Next?*,p.22.

[53] Ibid., p.25 (Speaker: Senator Biden).

[54] Ibid., p.63 (Pentagon Statement on India/Pakistan Sanctions).

lessons about how to move into the nuclear club."[55] President Clinton, for his part, claimed that the tests created "a dangerous new instability in the region."[56]

Congress, however, interpreted the danger not in the context of a regime in which it had lost faith, but rather in the apparent exposure of the unpreparedness of US intelligence. Immediately after the tests a Senate Subcommittee on Oversight was convened to investigate why the Indian tests should have caught American intelligence unawares. Its concerns were heightened by the fact that American intelligence had ostensibly been watching the Pokhran test site. Their failure to predict the tests resulted in what one article accurately described as "a widely criticized intelligence failure."[57]

That the tests were dangerous to the regime was, with the exception of France and the American Congress, accepted as a reality. The nonproliferation regime had been founded on the notion of the sole acceptability of five legal nuclear weapon states and (in spite of Iraq, North Korea, South Africa and Israel) this presumption had not been so gravely challenged. Even the 1974 Indian test was identified by India as a 'peaceful' nuclear explosion. In May 1998, however, the number of self-declared nuclear weapon states had increased from five for the first time. The preference on the part of several key European nations, as well as in Russia, was not to apply sanctions to either India or Pakistan. The US Administration – perhaps the most vocally concerned about the danger posed to the credibility of the regime – sought to draw these two states into negotiation, specifically regarding their potential accession to the CTBT.

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[55] *Crisis in South Asia*, p.30 (Speaker: R. James Woolsey, CIA Director).

[56] World News, 13 May 1998, "US imposes sanctions on India," (see www.cnn.com/WORLD.asiapcf/9805/13/india.us/htm).

Understanding of Responsibility:

A sense of responsibility for the events in India and Pakistan was largely absent following the Indian and Pakistani nuclear tests, for reasons which will be argued later. While best exemplified by the reaction of the US Congress, it has been observed more generally that "there was little willingness among most states and international institutions to pose punitive measures or take other concrete steps that would translate from words into deed their committment to halting nuclear proliferation."[58]

Although the American reactions were strong, they contrasted sharply with that which had followed the post-Gulf War revelations. Rather than communicating a sense of obligation to lead the way in shoring up the nonproliferation regime, increasing sentiment "against arms control and technological restraint"[59] found expression in revived desire for more a more defensive security such as that typified by NMD.

Public opinion in the United States, interestingly, reflected and even encouraged this new insularity. Far from supporting the norm of nuclear arms control, support increased for American nuclear weapons and a nuclear deterrent. When asked to rate the importance of retaining US nuclear weapons on a scale of 1 (not at all important) to 10 (extremely important) the mean response was 6.6 in 1993, 6.8 in 1995, and 7.2 in 1997.[60] There was, too, growing support for maintaining the

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[57] Albright, "The Shots Heard 'Round the World," p.21.

[58] Kile, "Nuclear arms control and non-proliferation," p.525.

[59] Walker, "Nuclear order and disorder," p.713.

[60] From a survey by the Stimson Center, quoted in Dennis M. Gormley and Thomas G. Mehnken, "Facing Nuclear and Conventional Reality," *Orbis*, vol.4, no.1, Winter 2000, p.113.

ability to develop and improve nuclear weapons in the future (38% in 1993, 46% in 1995, and 53% in 1997).[61]

This disinterest in ringing any necessary changes to the nonproliferation regime was pervasive. Voices such as that of Congressman Faleomavaega, who called for "the nuclear powers to take responsibility and set an example,"[62] were decidedly lonely. Echoing the concern over the damage done, in part, by the disconcerting intelligence failure, the Administration was called upon in the House to accept responsibility for having been caught off-guard. Congressman Rohrabucher stated that "we are talking about a significant failure on the part of this Administration...You are going to have to start bearing some of the responsibility for these failures."[63] The "failure" being spoken of, however, was the apparent intelligence failure, not a failure of nuclear nonproliferation policy or the regime. The momentum which had been in evidence in Congress following the Indian test in 1974 and following the Gulf War – the belief that the United States was under an obligation to lead international change – was absent.

The same could not truly be said of the US Administration. There existed no sense of culpability for assisting Indian and Pakistani capabilities, the Deputy-Assistant Secretary of State for Non-Proliferation, for example, asserted that:

> one has to recognize that these were two governments that acted on their own. I think they deserve the blame... rather than blaming the United States...We think this [the tests] was wrong, but we don't point the finger at

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[61] Ibid., p.113. This disinterest was observed shortly after the rejection of the CTBT in a newspaper article whose headline proclaimed: "Voters Seem Indifferent to Senate Treaty Scuttle" (see *The Washington Times,* 17 October 1999).

[62] "India's Nuclear Tests: A call for international nuclear disarmament," speech by Congressman Faleomavaega in the United States House of Representatives, 12 May 1998. (See www.indianembassy.org/pic/congress/faleomavaega.htm).

[63] *India-Pakistan Nuclear Proliferation*, Hearing before the Subcommittee on Asia and the Pacific of the Committee on International Relations, House of Representatives, One Hundred and Fifth Congress, second session, 18 June 1998), p.22.

ourselves for their actions.[64]

Nonetheless, there was a recognition that neither India nor Pakistan were prepared to renounce their weapons and thus be willing and able to join the NPT. Instead, the Clinton Administration attempted to bring these two states into the regime via the CTBT. Demonstrating the Administration's understanding of its responsibility to take the multilateral initiative, Deputy Secretary of State Strobe Talbott declared that

> the United States is encouraging India and Pakistan to take five practical steps that would help avoid a destabilizing nuclear and missile competition, as well as more generally reduce tensions...and bolster global nonproliferation.[65]

These steps, in addition to CTBT membership, sought agreement between India and Pakistan on dealing with fissile material, strategic restraint, export controls, and the conflict over Kashmir.[66] However, it is important to note that the Administration's understanding of responsibility, in this instance, was a fatalistic one in which the US attempted simply to bring India and Pakistan into the existing regime rather than seeking to alter or bring about changes to the nonproliferation regime overall.

The tests of 1998, then, did indeed prompt one of the key actors in the regime to seek changes to that regime. There was a similar marked absence of calls for change coming from Europe or Russia. Even in the United States, there was a weary resignation which greeted the fact of Indian and Pakistani nuclear proliferation. In addition, the Congressional fervour which had been so useful in the early years of the decade and so instrumental following the 1974 test was missing. The increasing belief, in Congress, that the United States was liable for itself only, and the growing faith in defensive security as evidenced by NMD, undermined the

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[64] Ibid., p.23 (Speaker: Hon. Robert J. Einhorn, Deputy-Assistant Secretary of State for Non-Proliferation, US Department of State).

[65] Talbott, "Dealing with the Bomb in South Asia," p.120.

[66] Ibid., p.120-21.

Administration's international intiatives, such as they were. Nonetheless, such initiatives did exist and, as the case of the 1974 Indian test demonstrated, such activity was a necessary precursor to regime change.[67]

Understanding of Immediacy:

Difficulties in translating the shock of the tests into regime change were only increased by what appeared to be a scepticism regarding how highly the tests should be prioritised. In an echo of the Osiraq shock, the goodwill of India and, to a lesser extent Pakistan, were held in greater regard than the bolstering the nonproliferation regime by making futile examples of these two states.

The misgivings, in Russia and in some European countries, over the utility of sanctions have already been noted, and give the first hint of the reasons for not falling out of favour with either India or Pakistan. The opening of the Indian economy in 1991 meant the opening of a vast economic market. Apart from the obvious fact that sanctions had not previously worked as a deterrent against proliferation, the post-proliferation application of sanctions to all but humanitarian assistance would involve the effective closure of this new financial arena. The temptation to Europe offered by the Indian market was noted soon after the explosions occurred, in an article which suggested that "Europe is expected to dodge sanctions and intensify trade with the subcontinent once the fuss dies down."[68]

However, the United States' inaction had greatest significance. Following the 1974 test, the same reluctance by the European suppliers to act was countered in part by the apparent belief within the United States Congress (and eventually

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[67] In addition, there were persistent calls from NNWS for the complete disarmament envisioned in Article VI of the NPT.

[68] Tim McGirk, "Nuclear Madness," in *Time*, 8 June 1998, p.26.

Administration) that change to the regime was an immediate priority and therefore could not be delayed by other considerations. While similar reluctance (although perhaps for different reasons) on the part of Europe and Russia followed the 1998 tests, it was now accompanied by a growing mistrust of the utility of multilateral objects like regimes in the American Congress.

In addition, the grumblings over the elevation of nuclear nonproliferation over other considerations manifested themselves in Congress almost immediately. The fact that, since the opening of India's markets, the United States had taken the opportunity to establish itself as a key trading partner, was not lost on the members. In his address to the House of Representatives, Congressman Frank Pallone stated that

> while I oppose nuclear testing by India or any other nation, I want to stress that this week's test should not de-rail the US-India relationship, which has been growing closer and stronger over the past 5 or 6 years. Particularly in the areas of trade and investment, the United States and India are finding that we have much in common.[69]

That such sentiments found favour in both the House and the Senate was particularly evidenced by the Congressional lifting of sanctions against both India and Pakistan a mere five months after they were initially imposed.[70] Even those who had, traditionally, been proponents of active American support for the nonproliferation regime, expressed uncertainty about placing nonproliferation concerns above American economic interests and of the utility of the regime as a vehicle for realising those (and other) interests. Speaking of potential benfits to be gained from trade and

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[69] "Developments in South Asia: Congressman Frank Pallone in the US House of Representatives, May 12th, 1998." (See www.indianembassy.org/pic/congress/pallone.htm).

[70] In addition, and as noted previously, there was obviously no basis to believe that a sacrifice of American interests would, in the end, dampen Indian or Pakistani ambitions.

investment, one Senator cautioned that "in spite of our justifiable outrage at this moment, I think it is important to keep in mind our long term strategic interests."[71]

Concerns, however, did not merely centre around the benefits to be gained by retaining good relations with India. The assessment of the damage likely to be done to those relations by the United States flinging itself into a reinvigoration of both the nonproliferation regime and its own anti-proliferation policies was also significant. There were expressions of disquiet at the harm that could be done, in the short-term, to American jobs and investors by stirring up the hornet's nest of nuclear nonproliferation once more. Speaking before the House of Representatives, one Congressman declared – to no opposition – that while no one thought that nuclear proliferation was a good thing, "hurting American jobs because of what India did doesn't make sense."[72] Continuing in this vein, he wondered: "how does it deter India and Pakistan from detonating if the punishment they get is that we lay off American workers?"[73]

There was therefore a widespread concern, in Congress, that the established norms of the nuclear nonproliferation regime should not trump the economic benefits (both real and potential) to be gained by maintaining decent relations with the subcontinent. In addition, there was some anxiety that the Administration might find itself inclined to embark on a crusade against proliferation rather respect than what Congress evidently considered the more important economic objectives. One Senator felt sufficiently anxious about this possibility to write a letter to President Clinton in which he maintained that

> since the liberalization of India's economic policies five

[71] *Crisis in South Asia*, p.25 (speaker: Senator Biden).

[72] *India-Pakistan Nuclear Proliferation*, p.14 (speaker: Congressman Donald A. Manzullo).

[73] Ibid., p.15.

> years ago, the US has worked in concert with the Indians to establish freer flowing lines of trade. This mutually beneficial relationship has now come to a sudden halt. I urge you to work closely with Congress to overcome the impasse and reclaim our position as India's leading trading partner.[74]

As it happened, the Clinton Administration shared this hesitancy to sacrifice economic benefits on the altar of nonproliferation, particularly (as will be discussed in the following section) when it seemed that such a sacrifice would be in vain. It was observed, even immediately following the application of sanctions by the Administration, that "the Clinton Administration and the US Congress take the threat seriously, but are preoccupied with other issues."[75] Nuclear nonproliferation objectives, and by extension change to the nonproliferation regime, were little competition for the economic harvest that could be reaped on the subcontinent. Rather than focusing on the nonproliferation regime, it was noted, "the trade-minded Clintonites are more interested in cracking open India's vast protected markets"[76] – an assessment which was partially borne out by the lifting of sanctions and almost total inactivity in the context of the regime.

Evidence for such an assessment is also to be found in the statements of important members of the various government departments who also expressed worries that nuclear nonproliferation as a *cause celêbre* would damage more immediate American economic interests to very little, if any, reward. Speaking before the House of Representatives, Undersecretary for International Trade David Aaron affirmed that "the sanctions and the climate created by the sanctions will

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[74]"Senator Lauch Faircloth's Letter to President Bill Clinton on Sanctions Against India," see www.indianembassy.org/pic/congress/faircloth.htm.

[75] McGeary, "Nukes...They're Back," p.30.

[76] Ibid., p.30.

inevitably affect US companies."[77] He went on to warn that "the sanctions will preclude export of selected items and the ability of the US government to provide important financial assistance and support to US companies."[78] Given that Aaron was speaking in an official capacity, it seems safe to suggest that the Department of Commerce, in addition to Congress, was far keen to see nuclear nonproliferation given priority in US policy. Concern was also expressed that such a decision would only benefit those other countries who were already engaged in placing their economic advantage before the niceties of multilateral action. The ability of American business to pursue projects would be "diminished without US government financial support. Certainly, suppliers and investors in other countries whose governments have not imposed comparable sanctions will inevitably benefit."[79]

Such sentiments were shared by the department of South Asian Affairs. Rather than viewing the test explosions as an opportunity to reinvigorate the stalled momentum of the regime, the Assistant Secretary of State for South Asian Affairs stated before the Senate that "as the other great giant of Asia, we see India with great potential. We see India as a democracy we want to engage, and that has been the signals [sic] we have been sending in terms of economic engagement."[80]

This immediate interest in the region rather the regime was true to an extent of Pakistan, although less in an economic sense than a political one. Alienating Pakistan as a consequence of its nuclear tests risked not only losing its goodwill, but of pushing a Pakistan with nuclear capability in a more radical direction. Congress was warned,

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[77] *India-Pakistan Nuclear Proliferation*, p.8 (speaker: Hon. David Aaron, Undersecretary for International Trade, US Department of Commerce).

[78] Ibid., p.8.

[79] Ibid., p.9.

[80] *Crisis in South Asia*, p.110 (speaker: Hon. Karl Inderfurth, Assistant Secretary of State for South Asian Affairs).

and accepted the warning with no audible dissent, that a severe American reaction risked such an eventuality. A former Senior Director of the National Security Council (with expertise in the Near East and South Asia) stated with foreboding: "I do not want Pakistan to increasingly have to turn to the Irans of the world to remain solvent."[81]

Regional concerns, therefore, dominated the assessment of the immediacy of action required by the shock. Whether those regional concerns were centred on the economic benefits to be reaped by trade and investment or political calculations about the need to avoid pushing Pakistan into the arms of those hostile to the US, they effectively elbowed the regime aside. The Senate was advised that the United States should "not allow [itself] to approach this through the lens of what we can do here to shore up the global nuclear nonproliferation regime. I would really focus on what we can do here to shore up stability in South Asia."[82] Indeed, as the tenor of the discussions and statements within Congress has suggested, such advice found a willing audience.

Unlike in the case of the 1974 test or even the 1991 revelations, this initial lack of urgency for regime change went gone unchallenged by subsequent events. After the 1974 test, the French and West German deals did a great deal to entrench a belief that the time for regime change too be enacted was running out. Even following the Iraqi revelations in 1991, the problems in North Korea (although clearly not as instrumental as those which followed the 1974 Indian test) nonetheless helped to maintain the momentum for regime change which had been established by the Iraqi shock. In the absence of a similar reinforcing event, the 1998 shock more

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[81] Ibid., p.89 (speaker: Dr. Richard Haass, Brookings Institution and former Senior Director, Near East and South Asia, NSC).

[82] Ibid., p.87.

closely echoes the Osiraq bombing than the other two cases. The apparent preliminary assumption, especially in the US Congress, that the nonproliferation regime was not an immediate concern could thus remain uncontested.

Understanding of Solvability:

This brief historical overview has revealed some activity to expand (if not develop) the regime as a consequence of the shock – namely the attempts by the US government to bring India and Pakistan into the CTBT. The failure of India and Pakistan to join the treaty, the international scepticism regarding the utility of sanctions, and the failure of the treaty in the US Senate, thwarted such efforts. Rather, the 1998 tests seemed to accompany a fatalistic belief that nuclear proliferation, if not inevitable, was not something that could be resolved through further development of the nonproliferation regime. There was, instead, a growing belief that "the United States – and the international community more generally – will have to cope increasingly with a problem of proliferation mangement."[83] This stood as the fundamental barrier to regime change in this case. However dangerous for the regime the shock was considered to be, and however willing the regime actors (particularly the Clinton Adminstration) to take immediate action to solve the problem, the belief that no such solution existed necessarily foiled any change to the regime.

Traditionally, the nonproliferation regime had provided several solutions to such shocks. One solution was the further development of export controls, which had been part of the response to the shocks of 1974 and 1991. The regime, however, had already incorporated a universal adoption by the NSG of full-scope safeguards and the

creation of a trigger-list of dual-use items. However, India and Pakistan had managed to proliferate despite these initiatives. As a consequence, it was unclear as to how export controls could be further altered to prevent a similar incident. More disturbingly still, the NPT-centred nonproliferation regime was unable to incorporate India and Pakistan. In fixing a date (January 1st, 1967) as one which distinguished legal from extra-legal nuclear weapons states, the possibility of bringing India and Pakistan into the NPT became on the one hand illegitimate (as NWS) and on the other, unachievable (as NNWS). "In demanding to be identified as nuclear-weapon states," it was observed, "India and Pakistan directly challenge the definition of the term and thereby the NPT itself."[84] The regime simply did not possess the flexibility to adapt to such a situation. A change to the regime which allowed the incorporation of these two states would, by doing so, nullify the NPT, its fundamental nonproliferation norm, and thus the basis of the regime itself.

As noted, the European and Russian unwillingness to apply sanctions, combined with an equal unwillingness to suggest or enact any other solutions strongly imply that the problems posed by nuclear proliferation in South Asia could not be solved through the regime. The reassertion of the French conviction, noted earlier, that India and Pakistan were only doing what other nuclear powers had done before them by acting in their own national interests went hand-in-hand with a belief that nuclear proliferation will occur when such a calculation is made, regardless of the punishments (such as sanctions) levelled by other states. Again, the likelihood of any solutions to the problem being multilateral and law-based was undermined.

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[83] Jason Ellis, "Beyond Nonproliferation: Secondary Supply, Proliferation Management, and US Foreign Policy," *Comparative Strategy,* vol.20, no.1, January-March 2001, p.2.

[84] Ambassador Thomas Graham, Jr., "South Asia and the Future of Nuclear Non-Proliferation," *Arms Control Today,* vol.28, no.4, May 1998, p.4.

The United States, of course, did implement sanctions and showed, at the level of the Administration at least, a real concern about the implications of the tests and a desire to do something. However, even those isolated few who were in favour of action being taken, admitted to qualms about the utility of sanctions, especially in the face of substantial international refusal to follow suit. One of these minority observed that

> Secretary [of State] Albright has noted sanctions, particularly unilateral sanctions, are not particularly effective. Certainly it would be preferable to have carrots to complement the stick of sanctions.[85]

The lack of faith in sanctions was not confined to the apparent hopelessness of international coordination. The very effectiveness of this particular problem-solving technique came under fire. Sanctions, it was argued by one Senator in a letter to the President, would act only to "[alienate] the world's largest democracy and one of our long-standing allies."[86] The Secretary of State for South Asian Affairs, for his part, expressed concern over the utility of sanctions in terms of their possible irreversability. He suggested that sanctions should perhaps be lifted on the grounds that "we have little ability to modify their application in the event there is an unintended negative outcome to their implementation."[87] Sanctions as a solution were not only ineffective but, it was feared, could turn out to be somehow dangerous in the long term.

The only other avenue for possible action which was actively explored was the possibility of Indian and Pakistani participation in the CTBT. Again, this initiative

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[85] *India-Pakistan Nuclear Proliferation*, p.2 (Speaker: Congressman Doug Bereuter).

[86] "US Senator Lauch Faircloth: Letter to President Bill Clinton on US Sanctions Against India," (see: www.indianembassy.org/pic/congress/faircloth.htm).

[87] *India-Pakistan Nuclear Proliferation*, p.5 (Speaker: Karl Inderfurth, Assistant Secretary of Stae for South Asian Affairs).

fell in the domestic battle between the Clinton Administration and an increasingly insular Congress which saw demands for American military restraint as an infringement of national interest. While some in the Administration (such as Strobe Talbott), pursued Indian and Pakistani adherence to the CTBT,[88] its rejection in the Senate demonstrated Congressional dismissal of this second possible avenue of action. Since this rejection, no further attempts have been made to bring about regime change. The shocks had raised problems which were considered to have no solutions, particularly in a US which "tends to see treaties as a burden on itself and other deserving members of the international community, and of little effect on proliferation."[89] Rather, nuclear proliferation was more and more viewed as something which was not preventable at all, or at least not preventable by reliance on the nonproliferation regime. The United States had already "moved away from its earlier attempt to roll back the nuclear status quo in South Asia."[90] Instead there were discussions of what one newspaper article referred to as "a quiet, conditional acceptance of Asia's new nuclear realities."[91] Certainly, the existence of Andréani's "perceptible sense of gloom" which pervaded American nonproliferation policy, was underscored by the Congressional testimony of former NSC Senior Director Haass who declared not only that "the possibility of...a rollback – that is, to bring about a nonnuclear South Asia is not a realistic policy option for the United States"[92], but also

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[88] Talbott, of course, led the diplomatic talks between the US and India, and the US and Pakistan and spoke of his desire that such talks should ultimately "reduce tensions on the subcontinent and bolster global nonproliferation." (Talbott, "Dealing with the Bomb in South Asia," p.120). Talbott, in this article, listed the signing of the CTBT by India and Pakistan as the first step which needed to be taken to achieve these stated goals. (Ibid., p.120.)

[89] Andréani, "The Disarray of US Non-Proliferation Policy," p.59.

[90] Amit Gupta, "Nuclear Forces in South Asia: Prospects for Arms Control," *Security Dialogue*, vol.30, no.3, 1999, p.325.

[91] *The Washington Post*, 21 February 1999 (quoted in Ibid., p.325).

his belief in "the foreign policy challenge facing the United States for the foreseeable future in this part of the world as one of management, not prevention."[93]

The Congressional confidence in the regime's capacity to provide solutions to the shock of 1998 and the very problem of nuclear proliferation itself, was clearly at a low ebb – its validity increasingly challenged by a "growing appetite for military options designed to counter proliferation once it has occurred,"[94] such as the holy grail of NMD. While the Clinton Administration appeared to hold more faith in the existence of multilateral solutions to the problems raised, the rejection of the CTBT by India, Pakistan and the American Senate put the nail in the coffin of the only international solution which seemed to hold promise. This, the scepticism of Russia and the European suppliers regarding the utility of sanctions and their unwillingness to join in multilateral action, pointed less to an unconcern with nuclear proliferation, but an inability to see a means by which the problems raised could be addressed.

Conclusions:

The shock of the Indian and Pakistani tests in 1998, although severe, did not and have not induced the kind of change to the regime inspired by the shocks of 1974 and 1991. The international reactions, while reflecting serious concern at the damage that had been done to the regime, betrayed hesitancy over who was react and how. The fundamental inability of the regime to incorporate states such as India and Pakistan made this unsurprising.

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[92] *Crisis in South Asia*, p.76 (Speaker: Dr. Richard Haass, Brookings Institution, and ex-Senior Director, Near East and South Asia).

[93] Ibid., p.76 (Speaker: Dr. Haass).

[94] Andréani, "The Disarray of US Non-Proliferation Policy," p.43.

There was nothing ambiguous about the 1998 nuclear tests. Nevertheless, the 1998 South Asian tests bear a closer resemblance to the bombing of the Osiraq reactor in both the confusion over how to respond to the shock, as well in the sharp divide between the will of Congress and the Administration. While 1981 saw the Reagan Administration's determination to ignore Congressional calls, such as they were, for action, the post-1998 context saw a Congress which did not see the nonproliferation regime, or any multilateral initiative, as holding the answer to horizontal proliferation and an Administration which, thwarted by that Congress, ran out of ideas following the rejection of the CTBT. The failure to achieve either domestic or international consensus on the solvability of the problems raised by the shock meant that no change – either in the regime or outside it – was able to occur.

There is little sign, moreover, that this defensive posture is likely to change in the near future. The election of the Bush administration in 2000 has meant that multilateralism has moved even further into the background, with military responses and power maximisation now being given priority. Unless a radical change occurs, the 1998 shocks seems likely to join the Osiraq bombing as a shock to the nonproliferation regime which failed to result in change in the regime's structure or norm (although for different reasons). In addition, this demonstrates again that while substantial change in the nuclear nonproliferation regime has been preceded by a shock, a shock does not necessarily preface change.

Conclusion

The dust of exploded beliefs may make a fine sunset.
Geoffrey Madan, *Livre san nom: Twelve Reflections*

In the thirty-three years since the creation of the NPT, the nuclear nonproliferation regime has developed considerably. Its membership has expanded to include all states except Israel, India, Pakistan and Cuba. There has been no withdrawal from the treaty by any of its members. Finally, in 1995, the NPT marked its twenty-fifth birthday by being indefinitely extended. The nonproliferation regime has, in other words, become entrenched in the international sphere.

The expansion of the number of participants in the NPT, however, is not the only – or even the most significant – way in which the nuclear nonproliferation regime has changed since its inception. It was the contention of the introduction to this study that the regime has not been characterized by stability or even gradual development. Instead, the possible role of shocks in facilitating rapid change of the regime, in contrast to periods of relative inactivity, was deemed worthy of investigation. Three questions were raised regarding this proposed relationship. The first asked whether such a pattern of change did in fact characterise the manner of regime's development in contrast to the assumptions that prevail in mainstream regime theory. Secondly, it was asked whether a relationship between shock and regime change was always reciprocal. If change to the regime does occur following shocks, is it necessarily the case that a shock to the regime will always be followed by regime change? Finally, the investigation turned to the question of how such change, or the lack of change, to the regime following a shock may be understood. The similarities and differences of these interpretations, and their correlation to subsequent

regime change, lends itself to a possible model of the relationship between shocks and regime change, which will be proposed as part of the following discussion.

The exploration of the cases of the Indian nuclear test in 1974, the Osiraq bombing in 1981, the uncovering of Iraq's proliferation attempt in 1991, and the Indian and Pakistani nuclear tests of 1998 have allowed some conclusions to be drawn regarding all of these questions through their examiniation in two chapters apiece. The first of these dealt with the way in which such change occurred and whether it was part of an overall pattern of non-incremental regime development. The second chapter investigated the circumstances under which regime change following a shock occurred (or failed to occur) in the context of how the shock was understood by the relevant regime actors. The conclusions drawn are by no means definitive answers to the questions posed. Rather, they are an attempt to consolidate the patterns and themes that have recurred throughout.

How the Nuclear Nonproliferation Regime Developed (or, the existence of a pattern and implications for regime theory):

The preceding chapters have shown that the nuclear nonproliferation regime has indeed developed in a way that poses problems for regime theory in its current form. As the first chapter of this study argued, regime theory has rarely devoted time to, nor allowed much theoretical space for regime change. Although a commonly accepted definition of 'genuine' regime change was suggested by Krasner in 1982 (change not merely to the rules and decision-making procedures of the regime but also to its norms and principles), explorations of regime change have, in practice, tended to be few in number, in spite of what appears to be a self-evident need for regimes to change over time in order to remain effective and valued by their

participants.[1] In reality, those who concern themselves with international regimes and theories thereof have "mostly examined regime formation processes."[2] Regime change, from the realist or neo-liberal approach, tends to refer to the collapse (rather than the maintenance of the regime) due to a corresponding decline of the relevant hegemonic power. Certainly, there are those who do engage with the possibility of a regime change occurring between the establishment and demise of the regime. These 'cognitivist' theories of regimes, it was argued, often incorporate ideas of regime change, as manifested particularly in some of the literature dealing with the development of environmental regimes. However, the assumption of incremental regime change prevails against any others.[3] Although the possibility of regimes undergoing significant change in the aftermath of a shock has been suggested before, the lack of a concrete investigation has meant that no direct challenge to notions of change in regime theory has been posed.[4]

The examination of the role of shocks in the nuclear nonproliferation regime, however, indicates that a pattern of non-incremental regime change – in the aftermath of a shock and in contrast to a preceding period of regime inactivity – does indeed exist, and thus that the inattention paid to the question of regime change, as well as

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[1] Krasner, "Structural Causes and Regime Consequences: Regimes as Intervening Variables," p.189.

[2] Lasse Ringius, "Environmental NGOs and Regime Change: the Case of Ocean Dumping of Radioactive Waste," *European Journal of International Relations,* vol.3, no.1, March 1997, p.63.

[3] See, once again, the example of Hopkins' assertion that "synoptic change [to a regime] is not plausible" (Hopkins, "Reform in the international food regime," p.264), or Gehring's statement that "careful case studies did not support the hypothesis of institutional change, but revealed a gradual, continuing development of regimes" (Gehring, *Dynamic International Regimes: Institutions for International Environmental Governance,* p.29).

[4] Among those who noted the link between shocks and regime change were Nye, " Nuclear Learning and US-Soviet Security Regimes," p.398. Christer Jönsson, it may be remembered, also proposed that "a pertinent question for further research is whether international regimes tend to change together after periods of regime persistence and stability" ("Cognitive Factors in Regime Dynamics," in Rittberger (ed.), *Regime Theory and International Relations,* , p.220. Harald Müller also referred to a shift in the norms of the regime (Krasner's 'genuine' regime change) as a consequence of the Iraqi revelations

the assumption of gradual regime evolution, are not justified. The indifference to regime change inherent in realist and neo-liberal theories of regime appears unwarranted, while the assumptions of incremental change which pervade cognitivist theories appear to be incomplete, rather than incorrect.

The Indian shock of 1974, the first case to be examined, was demonstrated to have occurred following a period of comparatively little activity in the nonproliferation regime which had prevailed broadly since the founding of the NPT in 1968 and certainly since the creation of INFCIRC/153 in 1971. The oil crisis of 1973-74 had increased the belief in the need for increased reliance on nuclear power. The concomitant belief that this increased reliance entailed the construction of fast-breeder reactors thus raised fears of a greater availability of plutonium. This, in turn, would increase general access to weapons-grade material and thereby foster nuclear proliferation. In addition, the emergence of new suppliers such as France and West Germany into the previously American-dominated nuclear market was inspiring competition for orders in markets such as Argentina and Brazil, where nascent nuclear weapons programmes already existed.

The history of the five years which followed the Indian peaceful nuclear explosion did much to support the proposal of non-incremental regime development. There was, as a consequence of the shock and in its immediate aftermath, a divergence of the expectations whose original convergence Krasner's definition cites as underlying an international regime. These expectations then reconverged during the following few years, allowing change to the regime to be negotiated. Accordingly, the regime underwent a significant elaboration with the creation of the London Suppliers Club and its agreement on the Nuclear Suppliers Guidelines. These

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"from 'commerce over non-proliferation' to 'non-proliferation over commerce'" ("The Internalization

guidelines entailed the introduction to the nonproliferation regime of specific rules and decision-making procedures to be adopted by nuclear supplier states when exporting. By making such a change, it was felt, proliferators would find it more difficult to acquire weapons-related technology on the international market.

These guidelines, the result of much debate between the United States and the Western European suppliers, constituted not only a rapid change to the structure of the regime but, crucially, reflected an accompanying change to some of its underlying norms and principles. The NSG expressed the understanding, which arose from the Indian test and hints of further likely proliferation, that supplier states had a responsibility beyond their own borders to prevent proliferation by exercising caution, or 'restraint' as the guidelines themselves put it, in their own dealings with countries whose motives may be questionable. In addition, the principle of the 'inalienable' right of access to peaceful nuclear technology, as implied in the Atoms for Peace Plan of 1953 and as enshrined in the NPT, had been challenged; it was acknowledged that the acquisition of nuclear technology and materials for possible military use should be regarded as 'proliferation', extending the definition beyond the acquisition of nuclear explosive devices (as implied in the NPT). The notion that a 'peaceful' nuclear explosion was somehow different from a weapons test, and that a meaningful distinction could be made between some peaceful nuclear technologies and military ones, was also found lacking -- a change which was reflected by the creation of a suppliers club and guidelines. The structural alterations which followed from the shock echoed the normative challenge to the ideals behind Atoms for Peace, which had managed to survive the past three decades.

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of Principles, Norms and Rules by Governments: The Case of Security Regimes," in Ibid., p.381.)

It seems, in other words, that the response to the shock of the Indian test was able to meet Krasner's criteria of genuine regime change as affecting the norms and principles of the regime, and not merely the rules and decision-making procedures. More importantly, these events resulted in an overall pattern of change – rapid change in contrast to previous regime inactivity and mediated by a shock – which differs from that allowed for or assumed by regime theory generally.

The next phase of so-called 'genuine' nonproliferation regime change which was argued to have occurred took place following the post-Gulf War revelations of Iraqi nuclear ambitions.[5] As in the case of the Indian nuclear explosion, the shock of the Iraqi revelations galvanised the regime's participants, in particular the United States, into innovative activity. The nuclear nonproliferation regime had received comparatively little attention during the early and mid-1980s, as the Cold War deepened and took precedence in American and Soviet security concerns. The end of the Cold War, however, paved the way for the return of the nonproliferation regime to become something approaching a priority.

However, the shock of Iraq's attempts at nuclear (as well as chemical and biological) proliferation prompted yet another divergence and (this time rapid) reconvergence of actor expectations. This shock acted as the catalyst for regime change to occur in a significant way for the first time in over a decade. The years between 1991 and the indefinite extension of the NPT in 1995 involved, if anything, even more extensive regime change than had occurred in the 1970's.[6] For the first time since their establishment in the wake of the 1974 Indian test, that part of the

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[5] The second case, the 'uninspiring shock' of the Osiraq bombing, will be left out of this part of the discussion for reasons which will become apparent in the next section.

[6] It should be noted again that, although the final conclusion of negotiations reforming the IAEA safeguards system were not concluded until 1997, innovations and impetus for reform were begun

regime dealing with nuclear supply standards was finally elaborated upon. This included the creation of entirely new guidelines on the transfer of dual-use technology – Iraq's favoured means of building WMD capabilities – and the revision of the objectives and instrumental measures of the international safeguards system. The steps taken in the 93+2 programme to reaffirm the IAEA's right to special inspections and the support of the UN Security Council were complemented by a stated determination to make use of the right of access to all sites in the search for undeclared nuclear material (again, reflecting the lessons learned from the Iraqi experience).

This decisive change to the rules and decision-making procedures of the nonproliferation regime was triggered by the shock of Iraqi nuclear ambitions and capabilities. Moreover, and again fulfilling the accepted conditions for genuine regime change, the aftermath of the Iraqi shock was further demonstrated to have brought about changes to the principles and, to a lesser extent, the norms which governed the regime. The 1974 Indian test, it will be recalled, stood as the first shift in the norms governing nuclear trade. In the years following this shock, the responsibility for preventing nuclear proliferation was deemed to fall as much on those states supplying nuclear technology as on those desiring it. In the intervening years between the aftermath of the Indian test and the Iraqi shock, however, the impetus behind the NSG reforms slackened. The shock of 1991, with its re-awakening of the NSG and revised guidelines on trade, heralded a normative shift *back* to the precedence of nuclear nonproliferation over nuclear trade. More radically still, the norms of IAEA safeguards expanded to include not only current activities, but to anticipate clandestine ones.

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before 1995 and reached their zenith with the indefinite extension of the NPT, with the 1997

In the context of the regime's principles, the shock of 1991 led to the proscription on dual-use items and IAEA determination to have access to undeclared sites. Following the revelations in Iraq, non-nuclear membership of the NPT was no longer understood to be a wholly reliable indicator of a state's intent. The assumption of compliance – the benefit of the doubt previously extended, in practice, to non-nuclear NPT states – was overturned. Instead, a request for dual-use items was treated with suspicion rather than trust, overshadowed now by the possibility of undeclared nuclear facilities.

In the case of the Osiraq bombing, the lack of enthusiasm in the US Administration was met with an equal disinterest in, or hostility to, regime change elsewhere. Congressional hearings, which support such change, met with hostility from State Department officials who observed that, even were regime change required, the United States could not simply force actions such as a reconvening of the NSG. Rather, it was declared, other suppliers would be unlikely "to embark on another highly visible, formal attempt to control further their exports."[7] The divergence of expectations – how to deal with the vote of no-confidence in the regime that the Israeli attack symbolized and how to approach the accusations of Iraqi non-compliance – was neither emphatic enough, nor did it result in the kind of reconvergence of expectations which characterised the shocks of 1974 and 1991. The inherent ambiguity of the event – the fact that Israeli accusations of Iraqi non-compliance could not be proven – helped to thwart the possibility of significant change to the norms, principles, rules, or decision-making procedures. This left the regime largely unaffected by the Osiraq bombing.

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conclusion of safeguards reform standing as the hangover of such innovation.

[7] Official State Department response to Congressional calls for a reconvening of the NSG in *The International Atomic Energy Agency: Improving Safeguards,* p.219.

Finally, the brief examination of the latest shock to affect the regime – the 1998 Indian and Pakistani nuclear tests – showed it to have occurred when the international consensus over how best to tackle nuclear proliferation had weakened. Divisions had appeared between the United States and Russia over arms control and American interest in the future of a National Missile Defence was increasing. While the international reaction to the tests was generally one of concern and dismay, no change to the regime has thus far been forthcoming, either to the regime's rules and decision-making procedures or to its norms and principles. The American rejection of the CTBT typified this lack of progress in the context of the regime – a lack of progress which has shown no sign of altering. The confusion over the future of the regime has remained unresolved. As in the case of Osiraq, diverging expectations have not, as yet, reconverged.

These case studies, which encompass the years before and after the actual shock, demonstrated that the development of the nonproliferation regime, between 1970 and 2000, thus consisted of two substantial periods of what may be considered 'genuine' regime change (1974-1979 and 1991-1997). Moreover, those periods of change were not part of a general pattern of incremental evolution, but evinced discontinuity – in contrast to a preceding phase of regime inactivity and in the aftermath of a shock.

Such a pattern, however, is beyond the abilities of mainstream regime theory to account for, even those aspects of it which hold superficial appeal in terms of the capacity to explain regime change. Hegemonic stability theory (HST) was identified in the introductory chapter as being historically both unhelpful and uninterested in questions of regime change. HST, predisposed as it is towards questions of stability, had been applied almost exclusively to the question of why an international regime

would be created and, to a lesser extent, why it might collapse (in both cases the determining factor being hegemonic power). Yet despite its neglect of the processes which occur between regime creation and demise, it was postulated that HST could help to explain the occurrence of transformative regime change in spite of itself.

However, the foregoing narratives of the histories of the three cases do little to support this notion. While the case of the Indian test of 1974 resulted in regime change due primarily to initiatives by the United States, it is equally true that suppliers such as France and West Germany had to come on-side for multilateral suppliers guidelines to have any meaning and thus for change to an international regime to occur. Moreover, the tacit acceptance of American actions by the Soviet Union was essential in allowing such change to proceed. Problematically for the assumptions of HST, the challenge of the shock to the regime did not, in accordance with the perceived declining power of its hegemon, result in the expected collapse of the regime. Rather, the regime change which occurred took place despite shifts in US hegemonic influence in the nuclear supply and exports and in other realms. The shock of Osiraq, on the other hand, was characterized not only by American disinterest in change, but also by sharp disagreements among the key regime actors.

A simple determination on the part of a hegemonic power for regime change is therefore insufficient to understand both the occurrence and extent of regime change which took place following the three shocks. Nonetheless, it is difficult to envision a situation in which an international regime could flourish in the face of the hostility of a hegemonic power or powers. The acceptance of, and desire for, regime change by its hegemon appears thus to be a necessary, if not sufficient precursor to regime change. Consequently, while HST is ultimately unhelpful as a means by which to

understand the mechanisms of regime change, its emphasis on the centrality of the hegemon is valuable.

It is not clear, from this study of only one regime, if this pattern of change is something that is peculiar to the nonproliferation regime, or whether it may be found elsewhere. It may be, for example, a type of change which appears in other security regimes or even – and despite Gehring's refutation – in environmental regimes as the consequence, say, of an environmental catastrophe. Even if such a pattern is specific to the nonproliferation regime, its existence remains a strong challenge to the understanding of change, and even to the lack of interest in the whole question of change, which have thus far prevailed in regime theory.

The disinterest in notions of regime change, which pervade much of mainstream regime theory, therefore appears unmerited. Realist and neo-liberal approaches to regimes, furthermore, remain unequipped to deal with regime change generally. HST – in spite of its helpful emphasis on the necessity of the hegemon's acceptance of such change – is ultimately insufficient for explaining the circumstances of such change.

As was pointed out by those concerned with cognitivist approaches to regime theory, regime formation and, to a lesser extent regime demise, have been emphasised at the expense of the developments that occur after or in between. However, the general assumption in such approaches of a particular type of gradual, continuous regime change seems unmerited. This is not to argue that incremental change is not present, or perhaps even the most common form of regime change that occurs.[8] As

[8] Neither is this to argue that incremental change is not in any way a part of the nuclear nonproliferation regime. The development of Nuclear Weapons Free Zones, for example, constitutes a part of the regime's development which occurred gradually (although, to be sure, the Treaty of Tlatelolco which was, to a great extent, a reaction to the Cuban Missile Crisis). Nonetheless, the preceding history seems to indicate *genuine* change to the nuclear nonproliferation regime tends to be characterised by rapid, non-incremental development.

noted above, it is possible that the nuclear nonproliferation regime is exceptional in this respect. Nonetheless, the investigations which have formed the basis of this study have demonstrated, in contrast to mainstream regime theory, the significance of the development of a regime between its establishment and demise. They have, furthermore, illustrated a very different pattern of development from that assumed in cognitivist regime theory. Although a number of cognitivist regime theorists have alluded specifically to the possibility of a pattern of regime inactivity followed by sudden change, theorizing on the subject of regimes has continued to assume, or even openly declare, a style of change which is incremental and predictable. The clear existence of a different pattern of change, therefore, requires that existing assumptions of regime change be supplemented, though not supplanted, to include this particular type.

Shocks and Regime Change: a reciprocal relationship?

The preceding summary has indicated the existence of a pattern of rapid, non-incremental regime development, following a period of regime inactivity and punctuated by a shock. The investigation of shocks in the nonproliferation regime also gave rise to the question of whether, if instances of regime change did indeed follow in the wake of such shocks, it therefore followed that a shock to the regime would necessarily be followed by regime change. As it was reiterated above, the regime developed rapidly in two episodes following the Indian test of 1974 and the Iraqi revelations in 1991.

The investigation of the Osiraq case, and the brief examination of the 1998 Indian and Pakistan tests, failed to reveal the kind of pattern which had characterized the shocks of 1974 and 1991. This was not because these incidents were not

shocking. As an act of counter-proliferation, the bombing of Osiraq clearly ran against the accepted practice of nonproliferation policy. More importantly, the growing acceptance of the possibility of Iraqi non-compliance confounded the goals of the regime, as well as expectations of the regime's effectiveness and stability, particularly with respect to safeguards procedures. In addition, the effects of the Indian shock had begun to dissipate: the shock thus occurred after a three year period of comparative inactivity in the regime. Similarly, the 1998 Indian and Pakistani nuclear tests constituted the first instances of self-declared nuclear weapons proliferation since the establishment of the NPT and were, accordingly, greeted with genuine anxiety. These tests, like the three shocks previous, also occurred after a period of inactivity in the regime.

Ostensibly, then, the Osiraq bombing and the 1998 Indian/Pakistani tests could have affected the regime in a similar fashion as the shocks of 1974 and 1991. The history of these cases, however, does not support this. Despite both its nature and the context in which it occurred, the shock of Osiraq did not result in any significant change to the regime. There was no change in, or expansion of, the export standards which had been devised following the 1974 Indian test. The Guidelines went largely unchanged for another decade. The concerns about IAEA safeguards and inspections, which were expressed, particularly in the United States Congress, were not met with the overhaul which eventually swept through them during the first half of the 1990s. Instead, the discourse between (and within) the regime actors during the years immediately following the shock degenerated into the adoption of incompatible positions and an American walkout of the IAEA. Shortly after the 1985 NPT Review Conference, the whole episode faded out of international consideration. There was little evidence, in other words, that the bombing of Osiraq resulted in genuine change

to the regime and the kind of rapid regime development which characterised the other two case studies.

The bombing of Osiraq therefore contradicts any assumption of a necessary reciprocal relationship between shocks and regime change, while the recent Indian and Pakistani tests appear to hint that they, too, have not and will not lead to the kind of regime change of the late 1970's and early to mid-1990s. Although the two periods of rapid change which occurred in the nonproliferation regime in the 1970's and 1990's were preceded by shocks to that regime, it does not therefore follow that a shock will necessarily initiate regime change. The consequences of such an event may not be assumed to be inevitable.

The Circumstances of Regime Change Following a Shock: overview and model:

The final question which remained to be answered in this investigation followed from the study of the relationship between shocks and regime change. This had to do with the circumstances under which a shock to the regime was or was not a forerunner to regime change. The investigation thus sought to clarify which interpretations of the shock were present or absent in the Indian and Iraqi shocks and not in the Osiraq incident.

The preceding investigation proposed that, in order for regime change to occur, it was necessary for the agents of such change to have interpreted the shock in certain ways. These understandings, which were a necessary intermediary between a shock and subsequent negotiations for regime change, were first manifested in the investigation of the 1974 Indian test and appeared to comprise four components. In as yet no particular order, they are: the understanding of the danger indicated by the shock; the understanding of responsibility for engendering the shock and, more

importantly, for leading change to the regime; the understanding of the urgency of regime change; and the understanding of the solvability of the problems posed or revealed by the shock – the question of whether feasible corrective action exists.

The relationship between shocks and regime change (a proposed model)

Having explored the ways in which the shocks of 1974, 1981, 1991 and 1998 were interpreted by the actors involved, certain patterns have emerged. In the cases where a shock led to rapid, non-incremental regime change, there existed four variables which preceded the political manoeuvrings and negotiations which eventually brought about regime change. These variables – the actors' understandings of danger, responsibility, immediacy and solvability – manifested first in the investigation of the 1974 Indian test and were central, by both their presence or their absence, to the outcome of the other three shocks examined. The relationship between a shock, the four understandings of it, and regime change may be illustrated by the model (figure 1) on the following page.

The model of regime change makes several assertions as to the processes between the occurrence of a shock and the negotiations and politicking which institutionalise regime change. The contention is that the presence of all four conditions is a prerequisite for successful negotiations for non-incremental regime change. Accordingly, the absence of any of the four is antithetical to such change. To elaborate, if a belief that a dangerous precedent had occurred which endangered the international security and credibility of the regime was absent, regime change (and the often-difficult political wrangling required to bring it about) would be simply unnecessary. If one makes the safe assumption that significant regime change cannot occur by accident, a willingness to lead or assist such regime change thus becomes

necessary. Equally, the actor or actors desiring to lead such change must be capable of successfully taking on a leadership role. It is here that the value of HST – such as it is – comes into play in the context of regime change.

PROPOSED MODEL OF NON-INCREMENTAL REGIME CHANGE:

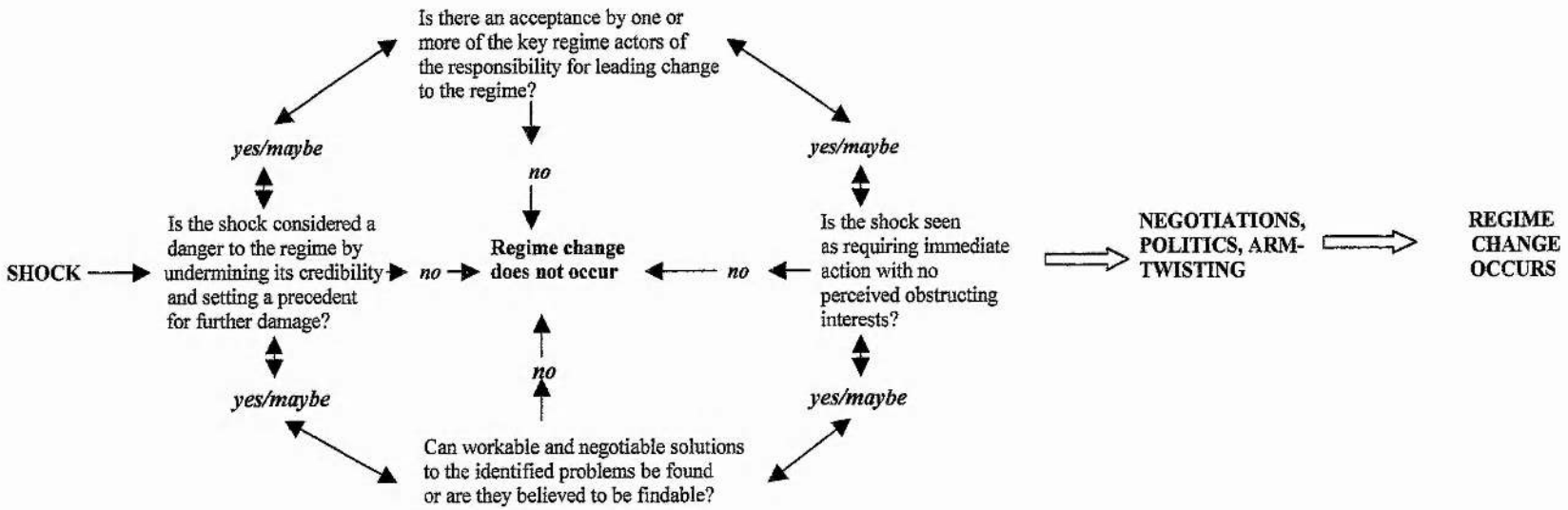

Figure 1

In addition, in the absence of a belief that need for regime change was urgent and overrode other competing interests, no regime change would be required. Neither, too, would such change be able to take place at the relative speed at which it did following the shocks of 1974 and 1991. Finally, without a belief that the problems raised by the shock had workable solutions, there would exist no desire to embark on the complicated negotiations for regime change. The necessary acceptance of all four variables – and the impossibility of regime change in their absence – is thereby reflected in the model proposed above.

The model also asserts that a possible acceptance of the four variables – a "maybe" answer to the questions raised – does not negate the chances of eventual regime change. Clearly, regime change is ensured by an eventual and active recognition of the danger posed, the responsibility for change, immediacy and solvability. Nonetheless, the potential existence of these variables keeps the possibility of regime change alive, hence the use of the "yes/maybe" option in the model of regime change.

While four conditions of change have been identified through the previous examination of the cases, the proposed model – with one exception – does not suggest that those conditions occur in a preordained sequence. This is because three of the four variables could overlap or occur in varying orders – a fact which is best reflected in the circular shape of the model itself.

One of these four, however, must precede the others. The understanding of the danger revealed by the shock exists as part of the foundation upon which the other interpretations are built. An acceptance of responsibility for leading regime change, a belief that such change is urgent and that the problems raised may be solved, necessarily follow an acceptance that problems for the regime have indeed been

revealed. The shock, in other words, must initially be interpreted as a shock of great magnitude before the three further conclusions may be drawn. As a consequence, the understanding of danger is located in the model as the first variable which follows from the shock.

Conversely, the remaining three interpretations may take place in any order. One can easily envision a circumstance in which a belief in the need to lead regime change follows or precedes a belief that such change is required imminently or that solutions to the problems raised are both workable and available. The same is true of the remaining two interpretations and, indeed, the possibility of all three occurring simultaneously is, while far-fetched, not beyond the realms of possibility. The above case studies do not themselves indicate that the understandings of responsibility, immediacy and solvability transpired in a permanent, specific order; nor is such specificity logically required. By giving the model a circular shape, this lack of interpretive hierarchy may be reflected. The double arrow which leads between the various understandings of the shock and the negotiations/politicking which they precede thus indicate a shift between the phases of regime change rather than a procession from the understanding of immediacy and the next stage of regime change.

Finally, it should be noted that the phase of regime change which encompasses the negotiations, politicking and arm-twisting is not elaborated on in the proposed model. Such processes have not been ignored in the preceding investigation. Indeed, the narrative first chapters of each case study deal specifically with these events and it is from them that the conclusions were eventually drawn regarding the interpretations of the shock which preceded them. The model, however, seeks to depict the circumstances which triggered the negotiations for change. While this crucial phase between the interpretations of a shock and subsequent regime change can hardly be

excluded from a model which seeks to depict such a process, an elaboration of the finer points of such negotiations is unnecessary here.

It remains, finally, to review the conclusions drawn from each of the four case studies regarding the occurrence or absence of regime change. These may now be placed in the context of the model which has been offered. The utility of the model in depicting the process of non-incremental regime change may thereby be assessed.

Before reviewing each of the four shocks in terms of the proposed conditions of change, it is helpful to condense the results which the preceding study has already revealed in the form of the following chart (figure 2). The brief reappraisal of the outcome of each shock will thus expand on this chart:

	Regime credibility undermined and dangerous precedent set?	**Key regime actor(s) accept responsibility for leading change to the regime?**	**Need for regime change considered urgent with no other interests taking priority?**	**Can solutions to the problems revealed by the shock be identified or are they believed to be identifiable?**
India 1974	***yes***	***yes***	***yes***	***yes***
Osiraq 1981	***maybe***	***no***	***no***	***no***
Iraq 1991	***yes***	***yes***	***yes***	***yes***
India & Pakistan 1998	***yes***	***yes***	***maybe***	***no***

Figure 2

The 1974 Indian Nuclear Test

The preceding investigation revealed that the years following the Indian nuclear test of 1974 consisted of rapid regime change. The creation of the Nuclear Suppliers Guidelines significantly tightened conditions of supply and, for the first

time, placed expectations on supplier states to exercise responsibility with respect to their nuclear exports. This new burden of obligation on the nuclear suppliers reflected not only a change to the rules and decision-making procedures of the nonproliferation regime, but a deeper shift in its established norms. In addition, these practical changes reflected a qualification – primarily by the United States – of the principles of the 1953 Atoms for Peace Plan and the inalienable right of peaceful supply. Instead, there arose a recognition that unfettered access to peaceful nuclear technology – including so-called "peaceful" nuclear explosions – could not occur independently of its military applications.

The regime change which took place in the second half of the 1970's was initiated and effected by the United States (with the support of the United Kingdom, the USSR, Canada and others). This was preceded by emergent understandings of the danger, responsibility, immediacy and solvability of the shock in the context of the nuclear nonproliferation regime. Specifically, each of these four elements of regime change in response to a shock were accepted by the United States, which alternately cajoled and badgered the unconvinced – particularly France and West Germany – into acceding to the changes which were eventually to result.

We saw that the United States, after a period in which the response to the Indian test was subdued, began to view the shock as one which jeopardised the credibility of the regime and set a dangerous precedent for the future. This interpretation, prompted by academics and advisers, appeared first in the American Congress. The frequent expressions of a desire "to legislate and see if we can avoid

some more Indias"[1] and the fear that "we will probably see more of this in the future if we are not careful"[2] attested to such an understanding.

Although India was not a signatory of the NPT and had, in a legal sense, done nothing wrong in conducting its nuclear test, it was increasingly believed that the regime's emphasis on the right of access to peaceful nuclear technology – up to and including the right to carry out nuclear test explosions – could not be allowed to stand. This conviction spread to the rest of the American government that the shock revealed fundamental shortcomings in the regime. It was feared that other Third World countries, such as Argentina, Brazil or Pakistan, might follow the same path as India if there were no response. Moreover, the expansion of market demand for nuclear power reactors and fuel-cycle technology would lead to the proliferation of enrichment and reprocessing facilities and hence to nuclear explosive capabilities. Such possibilities were made more ominous by concerns that the regime set no adequate supply standards.

In due course, France and West Germany overcame their antipathy to multilateral supply standards and became convinced of the dangers of trade-led proliferation. The Soviet Union, for its part, did not protest against the conclusions that were being drawn in the United States. Consequently, the Indian peaceful nuclear test was accepted as undermining the credibility of the regime and as intimating further problems to come. As such, it satisfied the first suggested condition in our model for eventual regime change.

The Indian nuclear test was also shown to have caused deep soul-searching, in the United States, over the use of American heavy water in the Indian CIRUS reactor. Such concerns again originated in Congress, prompting declarations that "the United

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[1] *Exports of Nuclear Materials and Technology*, p.24 (speaker: Senator Jackson).

States does not have a coherent nuclear export policy – unless it is to promote the indiscriminate sale of nuclear facilities abroad."[3] Disquiet over the policies of the Atoms for Peace plan – which was identified as having laid the grounds for the Indian test – underscored the growing belief in the need for the United States to lead any required changes to the nonproliferation regime. As the Frankenstein's monster metaphors abounded, so did calls in Congress for the United States to take steps not only to tighten its own nuclear supply standards, but to convince other supplier states to do likewise. As one newspaper editorial put it: "the United States, which initiated the nuclear era and has provided dozens of nations with civilian technology, has the responsibility now to convince France and Pakistan."[4]

That the US had acknowledged responsibility for taking the international lead was proclaimed by the US Congress and then accepted by both the Ford and Carter Administrations. They initiated the search for an agreement among nuclear suppliers regarding the technologies and information that should and should not be supplied.

The other suppliers, notably France, West Germany and the Soviet Union, were less keen on a formalised restraint on nuclear suppliers. In case of the USSR, which had carefully restricted its own supply of nuclear technology to satellite countries, reservations were expressed more for rhetorical effect than out of concern that its nuclear trade would be limited. In practice, it was more than willing to acquiesce to American leadership. France and West Germany, on the other hand, were genuinely hostile to American initiatives although they, too, were eventually persuaded to cooperate. The shock of 1974 thus provoked an acceptance, by the key agent of regime change, of the need to lead such changes. This coincided with a

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[2] *The Nuclear Anti-Proliferation Act of 1977*, p.87 (speaker : Senator John Glenn).

[3] *Exports of Nuclear Materials and Technology*, p.24 (speaker: Senator Adlai Stevenson).

quiet, if grudging, acceptance of such leadership on the part of other regime actors. As such, the reaction to the shock revealed the existence of another variable of regime change proposed in the model: the understanding of responsibility.

The model also made reference to the importance of the perceived urgency of action required if regime change is ultimately to occur. This variable – the understanding of immediacy – was one which emerged very gradually, with the US Congress showing initial concern and the presiding Ford Administration only becoming convinced of the urgency of action in 1976.

The immediate aftermath of the Indian test prompted Congressional fears that the opportunity to act would recede and that "if there is not action, and soon, the problem may become irresolvable."[5] Such fears, however, were not shared by the Ford Administration until the announcement of the France/Pakistan and West Germany/Brazilian nuclear deals which, it was argued, encouraged the belief in the necessity of immediate action and the folly of delay. Following this evidence that the fears of further proliferation were coming to pass, the Administration's decision to take the international lead was coupled with action to initiate change as soon as possible.

This sense of urgency was not shared by France and West Germany, who viewed the declining power of the US in the nuclear market as an opportunity to make gains of their own. It was their attempts to capitalise on this opportunity which convinced the United States not simply that regime change must take place, but that the time for closing the loopholes through which India had slipped was dwindling and that action could not be postponed. The speed at which the regime change ultimately

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[4] *The New York Times*, 25 February 1976.

occurred – in contrast to the uneventful years preceding 1974 – attests to this. The perceived need for immediate action again satisfies one of the model's conditions for regime change.

The remaining question regarding the perceived solvability of the shock was also present in the case of the Indian test, completing the circle required by the model of regime change. The identification of workable solutions occurred very soon after the test had taken place.

Blame was placed at the door of the regime and its inadequate supply standards. The solution was therefore considered to lie in an international agreement on tougher rules regarding nuclear trade. It was the absence of such an agreement that opened the loophole through which India had passed. Soon, President Ford was referring to his intention "to upgrade the safeguards when powerplants are sold or made available."[6] There was, moreover, a growing conviction that "the United States could not unilaterally prevent the spread of facilities and fuels contributing to a weapons capability."[7] The French and West German deals not only lent urgency to the quest for regime change, but suggested that a lack of international export standards was indeed at the heart of the problem and that a multilateral supplier agreement was the solution. The resulting American pressure on other supplier states to agree on common trade rules was intense, demonstrating the American belief that the problems revealed by the Indian test had specific, workable solutions.

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[5] From the Congressional Record, 13 March 1975 (speaker: Senator Symington), reprinted in *Peaceful Nuclear Exports and Weapons Proliferation: A Compendium Prepared by the Committee on Government Operations*, p.528.

[6] President Gerald Ford, interview with European journalists, May 23rd, 1975 in *Public Papers of the Presidents of the United States: Gerald R. Ford,* p.717.

[7] Brenner, *Nuclear Power and Non-Proliferation,* p.93.

The perception therefore took hold in the months after the Indian test that it had endangered the regime and demonstrated a need for action; that American leadership was required in order for the necessary regime change to occur; that the action for change could not be postponed; and that the correct course of action had been identified. As the model of this process indicates, it was the acceptance of *all* these interpretations which allowed the substantial regime change to occur.

The 1981 Bombing of Osiraq

The second shock we considered was the Israeli attack on, and destruction of, the Iraqi Osiraq reactor. Despite being a shock to the regime, the bombing of Osiraq did not initiate a period of rapid and significant regime change as had the Indian 'peaceful' nuclear test seven years previously. While the reaction to the events of June 1981 showed genuine anxiety, this anxiety did not translate itself into regime change. Instead, the shock sewed political divisions in the regime, ultimately acting more to corrode relations between the regime's main supporters than to strengthen or unite them.

The shock's ambiguity was an important part of the problem. This had implications for the way in which the danger it posed was regarded by the relevant actors – in this case, the USSR, the United States, France, and the IAEA. The occurrence of an attack by a non-NPT state against a non-nuclear NPT signatory suspected of cheating on its obligations was plain and stood as a blatant vote of no-confidence in the effectiveness of the regime. Israel's suspicions, however, could only remain suspicions. No irrefutable evidence of Iraqi deception was uncovered, hindering a unified reaction in favour of regime change.

In the United States, Congressional concerns about the intentions of the Iraqi nuclear programme did raise some fears both about allegedly peaceful programmes elsewhere and about the effectiveness of the IAEA safeguards system and the credibility of the wider nonproliferation regime. The Reagan Administration and State Department, while concerned about the inevitable damage to the regime's credibility by Israel's action, signalled that they did not share Congressional concerns about IAEA safeguards. Rather, the shock inspired relatively little attention to the dangerous precedent of Israel's counterproliferation strategy or the possibility of non-compliance by an NPT state. Instead, the reaction emphasised the narrowly regional context of the Middle East peace process (and the damage that had been done to it) as well as the increasing dissent within, and politicisation of, the IAEA General Conference over Israel's membership. President Reagan considered the shock to be, primarily, "further evidence that a real peace, a settlement for all of the Mideast problems is long overdue."[8]

There was evidence, too, that the Soviet Union interpreted the event mainly in terms of its danger for the region rather than the regime. France – the main supplier of the Iraqi nuclear programme – was dismissive of Israel's claims, asserting instead that the regime had been undermined by Israel's behaviour, rather than by Iraq's. The IAEA's Department of Safeguards, responding to the widespread criticism from the US Congress, indicated that it shared the French point of view. The Board of Governors, Director General and Department of Safeguards dismissed the possibility of Iraqi deception, claiming instead that no danger existed except insofar as that done to IAEA credibility by Israel's unjustified decision to attack Osiraq and by Congressional acceptance of Israel's allegations of IAEA ineffectiveness.

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[8] The President's News Conference, 16 June 1981, in *Public Papers of the Presidents of the United*

The implications drawn from the bombing of Osiraq were far from uniform among the relevant actors. Although there was concern that the regime had been undermined and a dangerous precedent set, the ambiguity of the event made it impossible to decide whether the main danger arose from Iraqi ambitions and the inability of IAEA safeguards to detect such things, or from the possibility of the regime being undermined instead by further episodes of Israeli-style counterproliferation. Nonetheless, and in spite of the regional emphasis, dangers to the regime were considered to have been exposed by the shock. As the model indicates, the possibility therefore remained that regime change could eventually come about.

None of the remaining three conditions of change, however, were satisfied. The understanding of responsibility inspired by the bombing of Osiraq stood in marked contrast to the Indian test. In the United States, the IAEA, the USSR and France, no acceptance of the responsibility for initiating and leading regime change was evident. In Congressional hearings – despite concerns over the credibility of the regime – the questions the shock had raised over the adequacy of safeguards meant that the shock was considered to be the IAEA's problem. Any lingering Congressional desire to resuscitate the kind of American leadership which had followed from the Indian test was foiled by the State Department's and Administration's refusal to consider that the US had any need to initiate regime change in this instance. Indeed, the research revealed an impatience with the increasingly strident Congressional criticism of the IAEA. The conviction that the danger of the shock lay in the damage done to the Middle East peace process, and in the *misplaced* criticism of the IAEA, negated the necessity of change to the regime.

States – Ronald Reagan, January 20th 1981 to December 31st, 1981, p. 520.

As noted earlier, Congressional suggestions that the NSG should be reconvened were dismissed on the grounds that it would merely

> rekindle the resentment and opposition of many developing nations...[and that] former NSG members themselves would be reluctant to embark on another highly visible, formal attempt to control further their exports.[9]

Responsibility for leading regime change was likewise absent outside the United States. The IAEA reacted defensively against any suggestion of flaws in its safeguards or inspections procedures. This obviated the need for the Agency to initiate changes to a part of the regime which, in its consideration, was already sound. The same was true of the USSR, which had joined the increasingly shrill chorus within the IAEA General Conference over Israel's allegedly groundless accusations and its own nuclear programme. France, too, refused to accept publicly that its nuclear export standards might be at fault (although its eventual hesitance about rebuilding Osiraq and supplying Iraq with HEU belied such public declarations).

Unlike the earlier Indian case, the Osiraq bombing therefore failed to instil, in any of the relevant actors, an acceptance of responsibility for leading or even actively assisting regime change. In the context of the model, the absence of such an understanding negated the possibility of regime change, even had the other conditions been favourable.

The other conditions of regime change were, if possible, even less favourable. There was no acceptance of the need for immediate action. In spite of the generally-held belief that the bombing had damaged the regime and set a dangerous precedent, regime change was not considered to be an immediate priority. In the United States, particularly, the division between Congress and the Administration over the need for

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[9] Official State Department Response to Reconvening of the NSG, in *The International Atomic Energy Agency: Improving Safeguards,* p.219.

change was exemplified by the low priority it gave to nonproliferation issues. Rather, the Administration's stated desire to "reestablish this Nation as a predictable and reliable partner for peaceful nuclear cooperation under adequate safeguards"[10] was given priority over the regime. So was the growing competition with the Soviet Union in the so-called 'second' Cold War of the early 1980's. In addition, the growing utility of Iraq as a regional counterweight to Iran discouraged probing too deeply into the Iraqi nuclear programme which was, at any rate, seen as a long-term rather than immediate threat.

This lack of belief in the shock as one which required immediate action infused the IAEA, the USSR and Iraq's supplier, France. Having decided that the main problem for the regime arose from Israel's lack of faith, these actors could see no need for immediate action to bring about regime change. Outside the American Congress, there is little evidence of a sense of regime change as demanding instant attention at the expense of any other concern.

The interpretation placed on the solvability of the problems exposed by the Osiraq case was no more conducive to generating regime change. The exploration of this shock revealed instead a lack of interest in change among those very parties which would, in ten years, be pressing for safeguards reforms and effective responses to non-compliance. In the United States, solutions which were identified were dismissed as being unworkable. Calls in Congress for the reconvening of the NSG were rejected by the State Department, and proposals to reform IAEA safeguards and inspections procedures were welcomed by neither the State Department or Administration. In addition, the US found itself at the centre of the political storm within the IAEA over Israel's membership, and in the unenviable position of

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[10] "Statement on United States Nuclear Nonproliferation Policy," July 16th, 1981, *Public Papers of the*

protecting both Israel and the IAEA from each other. As a consequence, a clear solution to the problems raised by the shock was not believed to be identifiable.

The same was true of the IAEA, the USSR, and France. These actors considered that the problems revealed by the shock did not reflect any failings in the regime. This necessarily precluded a need to locate and implement solutions. As a consequence, disagreements between the United States and the other actors on the nature of the problem, as well as divisions within the United States on the feasibility of suggested solutions, meant that the incident generated no consensus either international or domestically of what should and could be done. Once again, the model makes clear that this prevented regime change, even had the other necessary conditions been present.

The Iraqi Revelations of 1991

Ten years after the bombing of Osiraq, the truth about Iraq's nuclear programme finally emerged in the wake of the Gulf War. The earlier prospect of Iraqi nuclear proliferation – although admittedly ambiguous – had failed to galvanise the kind of extensive regime change which had followed in the years after the 1974 Indian test. When it became clear that Iraq (despite its commitments as a non-nuclear NPT signatory) had indeed been diverting its resources towards a nuclear weapons programme, the interpretations of the shock were very different to those of ten years earlier, and there emerged a greater unity among the regime actors regarding those interpretations. As in the case of the Indian test, those who led the changes did so believing that the shock had exposed flaws in the regime which other states might exploit.

Presidents of the United States – Ronald Reagan, January 20th, 1981 to December 31st, 1981, p.630.

It was at this time that "rogue states" were identified as posing a particular the danger to the regime's credibility. In the United States, both Congress and the Administration agreed on this point. A Senate hearing devoted to the "lessons" of the Iraq experience explicitly stated its intention to "learn from this experience so that we can prevent any other nations from pursuing the path of Saddam Hussein and posing such dire threats to others."[11] Other statements on behalf of the Administration referred to the "determination to combat the proliferation of weapons of mass destruction to regions of instability."[12]

Likewise, it became clear that states such as France and Germany, who had in the past proved so reticent in implementing regime change, shared US interpretations of the dangers posed by the shock. The IAEA, after its own internal battle to overcome lingering resistance, also accepted that the Iraqi case had revealed defects in the safeguards system which required change to avert a repetition. As in the case of the 1974 Indian test, the awareness of future dangers, and the damage that had thus far been done to the regime, opened the possibility of regime change. The shock was therefore able to satisfy our model's first criterion for regime change.

The understanding of responsibility provoked by the Iraqi shock was not only the reverse of that which followed the bombing of Osiraq but was, if anything, even more emphatic than that which occurred after the Indian test. Post-1974, there had been a delay before the US accepted the need to lead the necessary regime change, and before unity was established around this objective. In addition, the US also had to work hard to persuade suppliers such as France and Germany to accede to such change.

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[11] *Nuclear Proliferation: Learning from the Iraq Experience,* p.2 (Speaker: Senator Pell).

The Iraqi revelations inspired a much greater and more immediate unity of purpose. The American Congress this time focused its criticisms on the Departments of Energy and Commerce for having, in the words of the Chairman of one subcommittee, "left open an even larger avenue toward the development of the bomb, nuclear proliferation. This is unacceptable."[13] Unlike in Indian case, the presiding Administration required no convincing that the United States had to act in a multilateral context.

The other relevant regime actors this time both supported initiatives to strengthen then regime, and instigated or assisted the implementation of such change themselves. The IAEA, like the United States, soon accepted past failures of policy and sought to make amends by bringing about the changes deemed necessary. The Director-General's determination to bring about a reform of the INFCIRC/153 system, and confront internal resistance, was indicated by his assertion that the Iraqi revelations were a "reminder of the limitations of the present safeguards system."[14] The ensuing changes to the safeguards system attested to the belief within the IAEA's Board of Governors that the safeguards system had to change.

The same was true of those suppliers who had previously resisted the calls for new measures. In contrast to their behaviour in the 1970's, Germany, France and other European suppliers became champions of regime innovation, and actively involved themselves in bringing it about. Germany, for instance, gave information to the IAEA on its export sales, advocated and adopted the new requirements of the

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[12] "Statement by Press Secretary Fitzwater on Restrictions on US Satellite Component Exports to China," April 30th, 1991 in *Public Papers of the Presidents of the United States: George Bush, Book 1,* p.446.

[13] *Nuclear Nonproliferation,* p.2 (Speaker: Congressman Dingell).

[14] Blix, "IAEA Safeguards: New Challenges," p.34.

Warsaw Guidelines, and promoted the NSG's development. France, too, supported the adherence to strengthened export controls.

In terms of the evaluation of the need for immediate action, the 1991 shock once again differed drastically from the Osiraq case and moderately from the Indian case. The shock of Iraq's nuclear programme was, in the United States, never subject to the divisions between Congress and the Administration which had characterized the reaction to Osiraq and the initial reaction to the Indian test. Agreement on the need for immediate action infused the American government. The Bush Administration's concern with nuclear weapons proliferation was galvanized by the shock, as was the belief that the regime's reinforcement was of the utmost importance to the US, and outweighed other, competing interests. A "sense of urgency" pervaded consideration of the shock and the responses to it. As such, the possibility of regime change remained vigorous – a reality which is represented in the proposed model.

Finally, it came to be believed – this time as much outside as inside the United States – that practical solutions existed to the problems that had been identified. This was not to argue that the specifics of such solutions were instantly obvious, but it was believed that workable solutions could be found.

Within the United States, a strong consensus emerged on exactly what could be and needed to be done to strengthen the regime. It demonstrated itself in a general desire for improved export control, involving the reconvening of the NSG, and an agreement on the supply of dual-use technology. These were cited and agreed upon as a means by which to counter some of the ambiguities in the regime. In addition, there was consensus on the need for changes to the IAEA safeguards system and for greater support – both financial and diplomatic – for the Agency.

In the IAEA, too, the issues needing attention – the need for access to the UN Security Council; access to intelligence; and support for implementing its right to special inspections – were soon identified. The belief that there were workable solutions became evident in efforts to reform the safeguards system: the 93+2 Program. This rapid identification and enactment of solutions also reveal a conviction that the implications of the shock could be successfully addressed.

The understanding of solvability which resulted from the Iraqi shock therefore differed sharply from the post-Osiraq belief that change was unnecessary and, at any rate, solutions could not be identified. It differed especially from the reactions to the Indian test. While the 1974 shock had been followed by an acceptance of the shock's solvability in the United States (which then found itself with the task of convincing the more reluctant states), the disclosures about Iraq's programme gave rise to a relatively painless international consensus. The IAEA and supplier states, as well as the United States, all evidenced a belief that solutions could be found and quickly identified the solutions as lying in the reform of export standards and the IAEA's safeguards system. As in the case of the 1974 Indian test, the acceptance of the shock's essential solvability meets the final condition of regime change proposed in the model, paving the way for the negotiations and politics which remained.

Indian and Pakistani Nuclear Tests of 1998

The brief discussion of the most recent shock to the regime – the 1998 South Asian nuclear tests – revealed the difficulties of achieving regime change. Unlike the test of 1974, there was immediate realisation of the event's grave consequences, but little confidence that anything could be done about it. Instead, it is clear that this shock, like that of the bombing of Osiraq, has not brought regime change. The shock

of 1981, it will be remembered, failed in terms of the understanding of responsibility, immediacy *and* solvability. By contrast, the tests of 1998 appeared to fail on only one count. This, as the model indicates, is enough to end the chances of regime change.

The interpretation of the danger posed by the shock was not the foil for eventual regime change. Although the political divisions which existed between Russia, the European suppliers and the United States differed from the unity which had followed the Gulf War, this was not a consequence of indifference regarding the tests. Rather, while general concern existed regarding the implications of the shock for the nonproliferation regime, there were sharp differences over how such concerns should be addressed. The American emphasis on sanctions this time found little support in Europe or Russia.

Even the desire for sanctions was not uniform in the US. While there was evident disquiet in the Administration, Congress remained unconvinced not only as to whether sanctions were necessary, but as to whether the nonproliferation regime had really been damaged by such events. India and Pakistan, it was repeatedly noted, were not rogue states and should therefore not be treated as such. Interest in the regime as a whole – evidence that it was considered to be either necessary or useful – was less pronounced in Congress than in earlier times.

Despite the growing cynicism in Congress, the notion that the tests had done damage to the regime was generally accepted elsewhere. India was no longer making the pretence of a peaceful explosion, and thus the number of self-declared nuclear weapons states had increased from five for the first time since the establishment of the NPT. That this threatened both the credibility and future of the regime was self-evident and generally accepted. In the context of the model, the shock of the tests met

the first condition for regime change and, at this point anyway, the prospects for regime change remained healthy.

Such prospects remained relatively healthy in terms of the understanding of responsibility. The United States, which had led the regime change after the first 'peaceful' Indian test, was once again subject to a division between Congress and the Administration over what, if anything, should be done. This time, however, it was the Administration who sought to establish American leadership, while Congress remained unconvinced that the United States needed to initiate change to the regime. While representatives of the American government such as Strobe Talbott made several efforts to convince India and Pakistan to join the regime in the form of CTBT membership, the previous Congressional desire to internationalise the dangers revealed by the shock had given way to a far more insular, domestic approach. At the centre of this was the momentum which had been gathering for NMD – a different way of dealing with the problem of missile proliferation. The Clinton Administration's clear desire to lead changes in the international sphere found itself in conflict with a decidedly inward-looking Congress. Furthermore, no initiatives for regime change emerged from any of the other key regime actors, such as Russia or any of the European suppliers.

The question of how to prioritise the shock of the nuclear tests – the understanding of how much of a precedence regime change should be given – was also affected by international divisions on the question of the regime. The benefits to be gained from the recent opening of the Indian market were considered to have outweighed the need to take action. This was true not only in the case of Russia and Europe, but also in parts of the American government. The growing scepticism regarding the effectiveness of regimes made it easy for the economic advantages of

trade with India to take precedence over harsh sanctions and improvements to the regime. The same was true with reference Pakistan, and the belief in the need not to isolate and thus risk radicalising that state. Despite the Clinton Administration's obvious concern with the threat posed to the regime by the test, there was clear reluctance to elevate regime change over good relations with both India and Pakistan. The answer – to the question of whether regime change was considered urgent and of greater importance than any other conflicting interest – was thus far from clear-cut. In the framework of the model, the most accurate answer is "maybe", a response which nonetheless preserves the opportunity for eventual regime change.

Nonetheless, regime change in the wake of the 1998 South Asian tests has thus far failed to occur and, four years on, there appears little likelihood that it will. This is due to a belief in the lack of solutions to the problems raised by the shock. While the other three conditions of change remained favourable, there was no consensus on the way in which to address the problems of the shock and, indeed, no confidence that such problems could be successfully addressed.

It was argued that the Indian and Pakistani nuclear tests accompanied a growing conviction that nuclear proliferation was perhaps unavoidable and, if not, that the nonproliferation regime was not the best means by which to tackle the problem. The increasing hostility in the American Congress to regimes and international agreements in general attested to this. So, too, did the Senate rejection of the CTBT. It was through this treaty that the Clinton Administration attempted to solve the problems of nuclear proliferation and bring India and Pakistan into one part of the regime at least (although bringing these states into the regime, obviously, does not constitute regime change). With the failure of this approach – at the hands of the American Senate – no more practical solutions to the problem of nuclear proliferation

were deemed to exist or pursued. Instead, both the Administration and Congress began to believe that a more sensible solution lay in "military options designed to counter proliferation once it has occurred."[15] However, this approach (typified by the promise of a missile defence system) contradicts the very purpose of a nonproliferation regime. The initial belief in the Clinton Administration that the problems in South Asia could be solved by Indian and Pakistani adherence to the CTBT was effectively ended by the Senate's rejection of the agreement.

In addition, there was little indication that any other key regime actors considered themselves to have found a solution to the problem of South Asian-style nuclear proliferation. Sanctions, as a punishment for India and Pakistan and a deterrent to others, had been rejected by both Russia and the European suppliers. Their weary resignation echoed that in the American Congress. As such, the desire to pursue solutions (and the belief in the chances of finding any) was defeated and, as a consequence of this, the possibility of regime change was ended. Despite the encouraging presence of the three other conditions of change, the belief that the problems of the shock were not resolvable negated them. As the proposed model illustrates, all that is required to foil the chances of regime change is the absence of one of the four conditions cited.

The four cases which have been examined indicated four conditions whose presence was required for regime change to proceed. This, in turn, allowed for a model to be offered which illustrates the interaction of these four conditions. A brief review of the cases in the context of this model has demonstrated how it may be employed both to understand shocks which have already occurred as well as

[15] Andréani, "The Disarray of US Non-Proliferation Policy," p.43.

providing a basis for speculation on how recent and future nuclear shocks may develop in the context of the nonproliferation regime.

Conclusion:

The stated goal of the preceding enquiry was to investigate the assumptions regarding change in regime theory (how the nonproliferation regime had developed) as well as to investigate the manner of that change (the circumstances underlying this development). The medium of this investigation – the apparent existence of shocks which result in non-incremental regime change – has provided a useful resource by which to explore the existence of this phenomenon.

This is not to argue that such an exploration is complete. Questions still remain regarding the role of shocks in regime change. It remains unclear as to whether or not the manner of change evidenced by the nuclear nonproliferation regime is one which is peculiar to that regime, or security regimes in general, or even one which may be found elsewhere. It is also possible that there may be different 'types' of shocks, and that one of them – or a series of them – may be so powerful that they overwhelm the regime in question. Indeed, developments since 1998 have had precisely this effect on the nuclear nonproliferation regime, although they are beyond the scope of this study. Regardless of these possibilities, the preceding discussion allows us to assert with some degree of confidence that this pattern of development in the nonproliferation regime calls for an adjustment of the notions of change as they currently stand in regime theory. The extent of adjustment may, however, only be fully ascertained by a broader comparison of this pattern of change with that in other regimes.

This investigation has drawn conclusions regarding the circumstances of regime change based largely upon how the shock in question was understood by the relevant regime actors. Such an approach revealed interesting correlations between the interpretations of the shock by those actors responsible for bringing about or preventing change, and allowed for a model to be suggested which reflected such processes. In addition, the conclusions regarding the pattern of the regime's development indicate the need for an adjustment of the widely-accepted definition of "regime" itself. Krasner's definition, it will be recalled, identified regimes as "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actor expectations converge in a given area of international relations."[16] The preceding study, however, posed problems for this definition.

While correctly citing the necessity of principles, norms, rules and decision-making procedures in a regime, the definition leaves out the role of organisations. The investigation of the nuclear nonproliferation regime nonetheless highlighted the centrality both of established organisations such as the IAEA and those created after the formation of the regime, such as the NSG. More importantly, however, the definition's identification of expectations as converging in a given area seems unnecessarily limited in light of the conclusions drawn during the course of the study. The development of the nuclear nonproliferation regime, and an examination of the ways in which the regime has changed, points instead to a different possibility. Krasner's definition implies that such expectations converge once and then remain fixed, whereas the case studies indicated that regime change instead reflects the fact that actor expectations regarding principles, norms, rules and decision-making procedures may converge, diverge and then reconverge. Expectations do not

[16] Krasner, "Structural Causes and Regime Consequences," p.186.

necessarily solidify at the outset of a new regime, but may part and come together again. Indeed, it was suggested in Chapter 1 that such divergence and reconvergence must occur if a regime is to remain relevant in a changing international context.[17] The extent, type and circumstances of such change may vary from regime to regime, with the nuclear nonproliferation regime having served to provide interesting insights into this area. Thus, rather than standing as the definitive answer to the questions raised, the exploration of the relationship between shocks and regime change leaves many potentially fruitful avenues open to further examination.

[17] See Chapter 1 – "Regime Theory and Conceptions of Regime Change," p.36.

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